Presidential Address
ON
THE EVOLUTION OF INSANITY.

Delivered before the Medico-Psychological Association of Great Britain and Ireland at the Sixty-fifth Annual Meeting, held in London on July 26th, 1906,

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[Dr. Jones in his introductory remarks, after thanking the association for his election to the position of president, said that each president who had occupied the chair annually during the last 20 years in succession was still living. (Dr. Oscar T. Woods, who was president in 1901, has, however, died since the delivery of Dr. Jones's address.) In his references to the history of insanity in ancient times he mentioned early Egyptian allusions, the Biblical accounts of Saul, David, and Nebuchadnezzar, and mediæval views with regard to demoniacal possession. He said that during the Middle Ages over 100,000 persons were stated to have been put to death for witchcraft and sorcery, of whom about one-third were lunatics. He then spoke of the mediæval treatment of the insane in Great Britain by various herbal remedies, holy water, and holy wells, such as those of St. Winifred in Wales, of St. Maree in Ross-shire, Great Nun's Pool, St. Fillan's in Perthshire, and St. Ronan's near the Butt of Lewis. He then continued as follows:—]

I have selected as my subject the Evolution of Insanity, or more exactly the evolution of our conception of it, both as regards the special forms of mental disorder and the evolution also of their general treatment. It is not a little remarkable that whereas in former times various restraints and penalties were applied to the patient it is now the physician who is threatened with penal clauses and surrounded with restrictions. He has no power to treat under his own roof for payment any case in the early uncertified stage of incipient mental disease, the stage when treatment is most likely to be successful. If he receives such a patient—even his own brother or other relative—to board and lodge with him he is guilty of a misdemeanour and is liable to be fined £50. He is not permitted to receive any case of insanity unless certified and if he receives two or more patients, although they may be certified, he is again liable to be charged with misdemeanour. Moreover, if he has himself certified any patient to be insane he is debarred in consequence from applying to that patient his own counsel and treatment. In mentioning these particulars I am merely stating what the law is and am not suggesting that these restrictions are all of them improper.

The first custodial institution for the care of the insane was founded in Florence in 1389 and this was followed in 1403 in our own country by the establishment of "Bethlem"; subsequently in 1660 the Hôtel Dieu in Paris was opened and in 1737 an institution was established in Pennsylvania. Shakespeare makes frequent reference to insanity and during the two centuries which elapsed from his death until 1815, when an inquiry was held before a committee of the House of Commons, the treatment of the insane was accompanied by flagellation, torture, confinement in dark rooms, and acute suffering, often until death released them. The insane were tied to crosses or to pillars in churches, they were flogged at "trees of truth," and they were burnt at the stake as sorcerers. They were fastened in chains, strapped in covered cribs, and confined in wristlets and strait jackets even in our own country so late as the year 1841. The harsh measures of the eighteenth and early nineteenth century included also severe and unsympathetic medical treatment, such as blood-letting in the standing, recumbent, or sitting posture; active counter-irritants; drastic purgatives; the shower bath; emetics; and heroic doses of tartarised antimony, of mercury, and of digitalis. These have now given way to hygienic measures, exercise, and suitable medicinal and moral treatment of which congenial occupation and amusement form especial features.

It was only during the nineteenth century that lunatic asylums underwent the metamorphosis which has resulted in their present excellent condition. As a contrast to the gaols, shrines, holy wells, chains, tortures, and exorcism, we have to-day suggestions for the care and cure of early cases of insanity by "reception houses," and we already have well-planned and furnished hospitals for the acutely insane, others for the chronic insane, asylums for the criminally insane, institutions for inebriates or chronic drunkards and for the feeble-minded, and finally we have colonies for the epileptic.

Previously to the Gordon Ashley Act of 1828 there were but few legal enactments dealing with the care of the insane, those existing at this time dating back only to the second or third year of the reign of William IV., although the Lunacy Commissioners inform me that statistics may be traced as far back as the reign of Edward II. Prior to 1828 the Royal College of Physicians of London, represented by five of its Fellows, had the supervision and licensing of asylums in London and Westminster within a radius of seven miles, whilst the county justices of Middlesex and other counties acted for the provinces, a supervision which was not to the advantage of the insane. In the year referred to the number was augmented to 15 Fellows of the College and in 1832 this body was styled the Metropolitan Commissioners in Lunacy. In 1842 they were accorded the duty of visiting the public asylums of England and Wales and the whole of their report for this year extended to only one and a half pages. In 1845 the present board of 11 Commissioners in Lunacy was appointed, five of whom are honorary. It was not until Jan. 1st, 1859, that the number of lunatics was officially registered in this country. At that date there were 36,762 insane persons, a proportion of 1 to every 536 of the population. The number of registered insane persons in England and Wales when the Lunacy Commissioners were first appointed was 11,272, there being then only 15 county asylums. Last year (1905) there were 119,822 and a total of 88 asylums. The report of the Lunacy Commissioners has also grown from a page and a half to a volume of over 500 pages. This record would not be complete without some allusion to the more recent legislation for the idiot and imbecile. Up to 1847 no separate provision existed for this class, but Dr. Andrew Reed—a philanthropic divine—began to interest himself in this class and subsequently founded the Earlswood Asylum, from which as a pioneer sprang several other most deserving and useful charities. In 1886 an Act was passed permitting backward children to be placed in such institutions upon one medical certificate, merely stating that such a course would benefit the child, so that it is now no longer necessary to certify these backward children as "lunatics." We have further for children less afflicted the Epileptics and Defective Children's Act of 1899, making it permissible for public authorities to provide suitable educational faculties for this class. The number of mentally and physically defective children on the roll and actually attending the special schools for London has been kindly given to me by Dr. James Kerr and they are as follows: "Average attendance at elementary schools is 666,757 and at the special schools 5831 (mentally defective 4522, physically defective 1309). The full roll is 757,084 and 6952 respectively (mentally defective 5311, physically 1641), giving an average of almost 1 per cent. of defective children attending the special schools in London alone." Dr. Kerr further states "that there are probably as many more children mentally and physically defective who are not so classed."

Now many of the vagrants, ne'er-do-wells, profligates, and immoral persons, criminals and lunatics, are recruited from these classes, and in my own experience cases are received into asylums from prisons who have in infancy attended hospitals and charities as mentally and physically defective. If the stock is to be kept free from taint a proper supervision should be kept over this class. In country districts they are more definitely known and a certain amount of "communal vigilance" is exercised over them, but in towns this is obviously impossible, and it should become the duty of the State so to register them by special notification through the schools as to direct and control their lives and to see that adequate care is exercised over their destinies in specially adapted schools, homes, colonies, or settlements. Such a regard would tend to lessen the necessity for increased asylum accommodation; but to this we shall refer later.

Among the various contributory factors to the changes in the treatment of the insane, one is the recognition of mental diseases as an integral part of disorders of the nervous

system and not a fragment detached as it were from the domain of general medicine. Possibly also the mental infirmity of King George III. gave an impetus to the more enlightened treatment of mental diseases, which even long after this period continued to be a reproach. The fact that all institutions for the care of the insane are carefully inspected by Government officials of recognised professional ability and rank in law and medicine, whose reports are made public, has had a great effect upon the care of the insane, as also the fact that they are for the most part supervised by unsalaried boards of trustees representing charities or by managers and visitors elected by the people; and I think we may legitimately claim the further fact that institutions for the insane are served by responsible medical authorities who link their reputations with those of the institutions they serve and to which they devote their time with loyal energy and fervour.

There is in consequence of the above reasons more confidence on the part of the public who are now ready to send into these institutions all mentally infirm persons from whatever cause; more especially do we now find old people admitted who are suffering from the decay of nature and whose friends no longer have the necessary time, the accommodation, or the means to supervise them—cases which in the circumstances of the past would have been retained by their relatives in their own homes. Upon this point, going back to 1859, we find that 56 per cent. of all pauper lunatics were in asylums, the rest being in workhouses or with their friends. In 1905 over 78 per cent. were in asylums, showing among other causes that probably the capitation grant of 1874 may have had the effect of sending into asylums a large number of chronic and incurable patients formerly detained in workhouses and kindred institutions. Most of these cases, in spite of their transference in a state of senility and infirmity, owing to their improved sanitary surroundings live longer and therefore tend to accumulate in our asylums. Added to these senile cases there is an increasing number of young people who being mentally defective (and this defect is now recognised by law) are, whilst children, looked after and cared for at home and in special schools, but as adolescence approaches and they begin to give trouble they are brought into our asylums. Most of these cases, owing to the very nature of their affliction, are incurable from the start and they help to form the chronic remainder of hopeless cases. There is no doubt that this burden of the incurable insane is growing fast and that fresh accommodation is constantly being called for.

Surely the voice of our association should be clamant as to some remedies when more than 1 in every 285 of our population is an inmate of an asylum and when there are already over 120,000 certified insane persons in England and Wales; when, moreover, there is an equal number of potential lunatics, those not known to us by certification—namely, weak-minded and neurotic persons out of whom lunatics are recruited owing to a vicious inheritance or to a wretchedly sordid environment. Furthermore, the pauper roll has latterly been a growing one, as is shown by the report of the Local Government Board on poor relief in England and Wales during the half year ending Michaelmas, 1905, which exhibits the steady increase of the cost of pauperism, particularly in London, an increase on the corresponding half year of 3·1 per cent. for England and Wales. It was stated that during the year 1900 in the United Kingdom 1,882,000 persons sought poor relief and of these about half a million were over 65 years of age. On Jan. 1st, 1905, there were 932,267 pauper persons in England and Wales, an increase of 63,139 compared with the previous year. This is equal to about 1 in 37 persons, or 2·7 per cent. of the whole population of England and Wales, being a pauper person dependent upon the earnings of others. My own country (Wales) is the most distressful in the three kingdoms in this respect, having an average of 3·11 per cent. of the total population who are paupers, Scotland with customary superiority having the least number. The total cost of relief to the poor during the year ended Lady Day, 1904, for England and Wales was £13,353,656, an increase upon the previous year of £405 333. The latest information from the Local Government Board department shows that £36,264,702 were spent upon pauper lunacy from 1880 to 1904 inclusive. The result of the last two census returns also shows that whereas in 1880 there were only 65,345 pauper lunatics in England and Wales, in 1905 there were 109,100—an increase of 49 per cent., whilst the population during the same period has only increased 25 per cent. In the quinquennium 1880–84 inclusive the annual average expenditure upon intoxicating liquor in the United Kingdom was £143,799,641: in the quinquennium 1900–04 it was an annual average of £177,920,339—an increase of 24 per cent., whereas the population of the United Kingdom has increased by only 19 per cent.

With regard to the causation of insanity we know that heredity plays a most potent part. A history of insanity in the ancestors determines a tendency to this in the descendants. We also know that the spread of venereal disease is responsible for increasing certain forms of insanity which are of a most hopeless character as to recovery and that over-stimulation in many directions induced by modern social conditions contributes to insanity. Intemperance in the use of alcohol is well known to be a contributory factor and statistics collected from many sources and for a long term of years present an almost unchanged average incidence of insanity through alcohol. An average of 22 per cent. of men and of 10 per cent. of women who are insane in the county of London owe their insanity to alcoholic excess.

Attention may be specially called here to the diminishing birth-rate as further evidence of the love of selfish pleasure and the shunning of parental responsibility incident upon so-called progress, and not only is there a diminishing birth-rate but unconnected with this marriages are contracted later. In 1901 the birth-rate for England and Wales was 28·5 per 1000 living, then the lowest rate since the civil register was established, and 1·4 per 1000 below the mean rate in the ten years immediately preceding. In 1905 this had further fallen to 27·6, whilst for London the rate had fallen to 27·1 per 1000. This rate has been declining for many years but never before 1898 had it fallen below 30 per 1000. Civilisation means the association of men and women in towns which only the rich can circumvent, wealth enabling this class to live out of the towns. City life means artificial desires and their gratification, but civilisation also implies progress which proceeds at the expense of the less fit—a higher standard is fixed and those who are unable to attain it are left behind to sink lower and lower. The population of the convict and local prisons shows an increase in 1905 of 9447 persons as compared with the previous year.

I do not think that I am called upon to notice the asseverations of angry pamphleteers in the public press. When, however, a journal of the reputation of the *Times* (April 14th and 21st *et seq.*) takes up this question it is bound to arouse attention. The growth of insanity is undeniably a matter of considerable public importance and few subjects have of late more employed the pen of every class of critic than the legal, curative, custodial, and even the preventive aspects of insanity. Overdrawn and unjust statements have been made in the *Times* that the insane to-day are under the care of officials who have neither received the necessary training for conducting scientific investigations nor have the inclination to pursue them. Medical officers of asylums are stated to be physicians only in name, for they neither devote thought nor time to professional work. The asylum service is held up as a scarcely conceivable career for a young man of promise or for a person of real capacity. Moreover, it is stated to be a service which has practically excluded insanity from the area of scientific investigation. In short, asylum medical officers are in these articles actually held responsible for the accumulation of incurable insanity in our asylums, a state of things which implies a grievous burden upon the community. It is then suggested that a special hospital would render unnecessary "the provision of a constantly increasing number of huge buildings for the life-long incarceration of thousands of men and women who are now annually suffered to drift into hopeless incurability" and who accumulate *ex hypothesi* from the failure of asylum physicians to cure them.

Now if these statements are true and if the reduction of the blot and burden of insanity can be thus relieved I am able from this presidential chair and with the unanimous voice of this association to promise the scheme our most cordial support, but although I should welcome the continuous and direct assistance of hospital physicians in our work I feel that they can no more prevent the occurrence of incurable insanity than they can prevent the filling up of cemeteries. It may be recalled that Sir William Gull over 40 years ago was medical superintendent of the insane wards of Guy's Hospital. He had charge of the insane cases in that hospital and had the advantage in their treatment of the services of the medical officers and of the visitation of

hospital physicians and surgeons. Yet what happened? The Lunacy Commissioners considered that the patients were less favourably placed there than those who were in asylums, and the hospital authorities, in the interests of the insane, were compelled to close the wards. Is the treatment of insanity in this country to-day the shame and reproach which our critic asserts? I venture to think these statements are not only inaccurate but they are also detrimental to the position we claim to hold in the larger medical world outside our asylums and I purpose very briefly to refer to this aspect.

[Dr. Jones here discussed in some detail questions of medical treatment in asylums as well as recovery-rates and death-rates at various times and places. He then continued as follows:]

Having analysed the recovery-rate and noticed its fall within recent years let us now compare the varieties of insanity as they are known to-day with those of which we had knowledge a century ago. Of these epilepsy appears to have undergone but little change and remains intractable in regard to cure. General paralysis, on the other hand, has become more common. John Haslam early in the last century was the first to describe this disease, although Esquirol had already noted the extreme gravity of those cases in which dementia was complicated with paralysis. Dr. T. S. Clouston refers to deaths among women from this disease during an experience of over 30 years. In the first decade of his experience 7·5 per cent. of the deaths among women under his care were from this disease, in the second the percentage had risen to 9·7 per cent., and in the third decade to 12 per cent., whilst in the following year (1904) the deaths from general paralysis among women had risen to 23·5 per cent. In my own experience for 1905 at Claybury a proportion of 36·5 per cent. of the total deaths were from general paralysis of the insane. The time of onset of general paralysis after syphilitic infection appears also to be shorter than formerly. In a recent average the period is given as about ten years, whereas past records give an average of 15 years, a fact which tends to show one of two things—namely, either a diminished resistance of the individual to the effects of competition or an increased "stress" through the conditions of modern life in which the stimuli are both more numerous and more complicated. It is certainly not syphilis alone which is the cause of general paralysis, for in the insane population of the Straits Settlements Dr. W. G. Ellis, a competent observer, states that general paralysis is exceptional there, although syphilis is rampant; probably the Malay race has not reached the stage of evolution in civilisation at which "stress" is felt. It is further asserted by those in a position to form a judgment (and Sir Alfred Cooper is of this opinion) that syphilis is not more common to-day than it was a century ago, although general paralysis appears to be on the increase.

Dementia præcox seems formerly to have been rare but it is now so common that it attacks prematurely our most promising and educated youth, the brain worker rather than the manual labourer, young men rather than women, and it is a disease so incurable that it tends to fill our asylums with hopelessly insane patients. Haslam refers to it as "a species of insanity sometimes occurring about the time of puberty, especially in those who have possessed a good capacity, a lively disposition, and in females more than in males. Their faculties are gradually obliterated until they are at last complete and incurable idiots." Although premature dementia, as such, is not referred to in the Lunacy Commissioners' report, the statistics for the last quarter of a century support the assertion that it is more common than formerly. These cases almost invariably commence in depression and it is justifiable to conclude that they were classed as melancholia, which has risen from 21·5 per cent. of the total admissions in 1878 to 31·2 per cent. in 1904. Cases of mania, on the other hand, have diminished from 53·8 per cent. of the total admissions in 1878 to 40·3 per cent. in 1904. Senile insanity, which shows the wreckage due to long-continued stress, has apparently undergone a remarkable increase, partly due, it is acknowledged, to increased registration. In some districts senile, or I would prefer to call it pre-senile, insanity has increased from 11 to 20 per cent. of the total admitted into asylums within the last 16 years and the evidence given by Sir John MacDougall before the Commission on the Feeble-minded confirms the increase in this form. The congenital varieties of mental deficiency show but little increase according to asylum statistics. These are teratological variations not controlled by any natural laws and they make themselves apparent by arrest of development often accompanied by physical stigmata. These varieties, which exist in every country and among every race, are the least reflection upon civilisation. They occur among the lower animals and are familiar to all observers of comparative natural history.

[Dr. Jones here mentioned some views held in the eighteenth century as to the causation of insanity and expressed sympathy with the advocates of "Eugenics." He then proceeded as follows:]

The highest function of medical science is the prevention of disease—i.e., the adoption of special measures which are known through experience to be protective against injurious influences; and of all known diseases there is not one in which there is either a greater need of prevention or one which permits of more effectual limitation by precautionary measures when taken in the early stages than insanity. Hence we need statutory authority to treat incipient insanity as other diseases are treated—namely, with full freedom to the physician and proper and adequate safeguards for the interests of the patient. Such means would prove to be a most valuable auxiliary towards prevention. I am of opinion that those who undertake the care of the insane in the incipient stages should be especially sanctioned by recognised authority so to do; but I do not believe in public bodies undertaking the care of cases making high payment, as this can be better done by private enterprise and without the "red tape" so dear to public authorities. This suggested limitation of municipal accommodation for private patients is clearly acknowledged by Mr. P. M. Martineau in the first report of the London County Council Asylums Committee for Claybury in 1893, when he described it as an effort of the London County Council "to provide for a class of patients above the pauper class, but who can ill afford to bear the cost of a private asylum, and who may find comparative quiet and comfort—perhaps even a touch of "home"—in such an institution as the Claybury mansion house." In regard to insanity as in other diseases the neglect of ordinary hygienic rules and the failure to observe natural laws are inevitably and remorsely punished. Nature is a good friend but a bad enemy, for she never forgives a wrong, and she is again wholly selfish—perhaps, more correctly, wholly just—for she invariably decides the race to the swift and the battle to the strong. It is in the observance of a proper health code and by an adherence to temperance in all things that insanity can best be prevented. If only the evils of alcohol and venereal disease were disposed of then half the problem of insanity would disappear with them. Many suggestions on the lines of reclamation, education, and restriction have been made for fighting intemperance, but hitherto they have not been distinguished for their wisdom or practical statesmanship. As a medical association we should carefully consider in what way we can best assist towards restricting drink and drunkenness and I for one welcome the attempts of the National Temperance Legislation League (of which Viscount Peel is the President and Sir Thomas Whittaker the chairman of executive) to bring its views before the country and the legislature with the object of promoting sobriety in such ways as local conditions and public opinion may render possible.

We accept the statement that society is bound to provide for and to support its own languishing sick and feeble, but when 1 in every 285 persons of the population is an inmate of a lunatic asylum, when 1 in every 157 during the year 1905 has undergone a term of imprisonment for offences against the law, when 1 in every 100 children of elementary school age is so mentally or physically defective as to require special educational facilities, and further, when 1 in every 36 persons in England and Wales and 1 in every 31 in London is a pauper, it is surely time that some stir were made. The whole of this so-called "defective class" have a right to be protected against themselves and the control which they lack should be supplied to them from without; at the same time society has a right to be protected from the transmission of their defective qualities to future generations. I have no sympathy with the crude and barbarous mutilations proposed by indiscreet and fanatical persons who are devoid of any quality of sympathy or patience necessary to enlightened reform.

It appears to me to be necessary to subdivide and classify the whole of the defective classes and if possible to bring them all under one great department of State, so that in youth they may be specially notified and registered, in

adolescence be strictly observed, and in maturer years those of them still supervised who have not succeeded in taking their place in the community as contributors to its welfare, and in this way they would be saved from a life of crime, vice, or any of the forms of pauperism. So much may be involved in this suggestion that it may well form the basis of inquiry and investigation by another Royal Commission. I am of opinion that insanity, which of all illnesses inspires terror beyond any other and causes a sense of helplessness, might be lessened if the hospitals of our cities (whether associated with a medical school or not) were to initiate out-patient departments where patients could apply for advice and submit to treatment for mental symptoms without loss of liberty. Where this experiment has been tried it has proved most satisfactory. Moreover, our public asylums, built and supported by the ratepayers, should give them some relief and benefit in return. They should be the centres for disseminating, through their medical officers and nurses as missioners, a health conscience and a creed which should reform the districts they serve. Each of our asylums should be a centre for clinical instruction. It should be a school where any qualified medical practitioner could refresh his knowledge of the subject of insanity in all its bearings and where the medical staff should give advice to any applicant suffering from premonitory symptoms of incipient insanity, and power should be given by law to take such cases in for treatment if necessary as voluntary boarders. An asylum should be the place where the principles of Eugenics should be widely disseminated, for surely it is wiser and better to make every effort to arrest insanity before it has reached the stage of certificates than to wait until it has been legally established. Every facility should be given by public bodies for students and medical men to receive full and adequate clinical and systematic instruction in insanity and there should be a diploma in mental diseases granted by the Royal Colleges of Physicians and Surgeons which should be a qualification necessary before any medical officer can receive the higher appointments in public asylums, just as the diploma of D.P.H. is necessary for medical officers of health. The University of London has already taken a step in this direction by the recognition of mental diseases as a special subject for the M.D. examination and the further question of a diploma is worthy the attention of the University authorities.

[Dr. Jones here referred to the teaching of hygiene and temperance in elementary schools, to the after-care and boarding-out of the insane, and to the probable influence of old-age pensions in reducing the number of aged persons in asylums. He continued as follows:]

May I ask in conclusion what our great national association is doing and has done in the direction of mitigating insanity. Our association has risen, owing to the vigilance and faithful care of our treasurer, to be, so far as financial position and annual income are concerned, the second of the medical societies of this country. Founded in 1841 with a membership of 44, it can now boast of a roll of over 700 qualified medical men and women interested in the improved treatment of the insane. Such membership must be a bond of union to all asylum workers and this bond is greatly strengthened by our representative journal, so ably conducted under the experienced editorship of Dr. H. Rayner, Dr. Conolly Norman, Dr. A. R. Urquhart, and Dr. J. Chambers. With the view of encouraging investigation and research our society continues to hold an examination in mental medicine for qualified medical practitioners engaged in the asylum services and a certificate is granted by the association as a mark of proficiency, and I consider this encouragement and the continuance of this examination to be imperative upon us until such time as the universities and conjoint medical colleges take the matter up. This year six candidates have been successful in obtaining this certificate. A medal with an honorarium of ten guineas is also offered annually for an essay by any assistant medical officer upon a subject connected with the clinical study of mental diseases and two essays of remarkably ability have recently been presented, one dealing with the special pathology of insanity, the other dealing with the incidence of tubercle. Further, a prize of £30 and a gold medal are also open to assistant medical officers as an incentive to the study of insanity and both are this year awarded. The improvement of nursing in our asylums and mental hospitals has always been an object of much solicitude and of considerable interest to the council of our association. Didactic instruction in the form of lectures to the staff by the asylum medical officers, according to a syllabus laid down by the association, has become the almost invariable rule in asylums throughout the three kingdoms as well as those of some of our colonies. The period of training for the certificate of the association for proficiency in mental nursing now extends to three years and such training enables the holders to obtain better executive positions in various institutions as well as in private nursing, and by ensuring better prospects encourages a more ambitious and a better class of nurses. The records kept by our energetic and methodical registrar, Dr. Alfred Miller, show that there are at present no less than 7555 persons—3549 men and 4006 women—who have obtained the certificate for proficiency in mental nursing, and I think the least we can expect for those who thus devote themselves to duties which, were they not essentially Christian in the highest sense of the term, would be positively repellent is that with regard to their later days they should at least be placed in such ease and comfort as to old-age provision as the ordinary policeman. More we do not ask, and I am happy to think public opinion is now maturing towards the view that they deserve as much.

During the past year we have had a special committee, under the chairmanship of Dr. R. Percy Smith, to consider the classification of insanity. This committee in the light of our present knowledge of psychology, pathology, and symptomatology has discussed the matter very fully and has endeavoured intelligently and practically to subdivide the whole of mental diseases, to rearrange them, and thereupon to suggest a nomenclature which, if not final, is at any rate a workable scheme in harmony with the united opinions of members of the committee and based upon psychological and pathological knowledge as they fit in with the various symptoms presented. This year also witnessed the final presentation of a scheme of statistical tables, which to be of any use for the collation of our knowledge and for general information in respect to insanity requires the loyal coöperation of every member of our association. The committee with Dr. D. Yellowlees as chairman, deserves the grateful thanks of the whole association for the years elaborate and consistent devotion to this task.

In conclusion, I would suggest that an annual lectureship be endowed by our prosperous association dealing with insanity in its sociological aspect, for the more we work into these side issues the more do we feel that the life of intellect, of emotion, of action, of thought, and even of pleasure have effects which command our earnest attention. The whole question of insanity demonstrates what a great thing life is, and that there is no aspect of it unworthy of study or destitute of interest.

A Lecture

ON

EPIDEMIC CEREBRO-SPINAL FEVER, WITH ILLUSTRATIVE CASES.

Delivered in the Glasgow Royal Infirmary

BY JOHN LINDSAY STEVEN, M.D. GLASG.,

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GENTLEMEN,—During the past few months a number of cases presenting the features of epidemic cerebro-spinal fever or meningitis have occurred in Glasgow. A memorandum on the subject for the consideration of the health committee has been prepared by Dr. A. K. Chalmers, medical officer of health of the city. Extracts from this memorandum were published in the daily papers on June 23rd last giving a statement of the facts as regards the number of cases, ages of the patients attacked, &c., so far as then known to the health authorities.[1] From March 10th, 1906, till that date information had been obtained of 44 cases, 32 being under

[1] This statement has also been published in THE LANCET and British Medical Journal of June 30th, 1906. In THE LANCET of the same date a paper dealing with the first ten cases of the epidemic, by Dr. William Wright and Dr. W. Archibald, assistant medical officers of health of Glasgow, was published.

the age of 15 years and 30 of the patients having died. On June 7th, when I had an interview with Dr. Chalmers concerning the patient who died in Ward 12, and whose case during our ward visits I demonstrated to you as a characteristic example of epidemic cerebro-spinal meningitis, he courteously informed me that on that day they had information of 29 cases of which 20 had terminated fatally; Weichselbaum's diplococcus intracellularis had been demonstrated in eight or nine of them; and of five post-mortem examinations which had been made revealed the anatomical changes of cerebro-spinal meningitis, although only four yielded the diplococcus from the meningeal exudate, the fifth having been associated with the staphylococcus and being clearly of septic origin.

I think the credit of first directing attention to the probable presence of a disease resembling epidemic cerebro-spinal meningitis among the children of the city must be given to Dr. J. W. Anderson of Dennistoun who during 1905 asked me to see one of his cases in an infant, about a year old, in whom the retraction of the head and Kernig's sign were well marked but in whom no bacteriological examination was made. At Dr. Anderson's request I drew up a short report stating my opinion that the child was suffering from cerebro-spinal meningitis, which he submitted to Dr. Chalmers. In his memorandum Dr. Chalmers writes as follows: "During 1905 I had, through the courtesy of Dr. Wallace Anderson of Dennistoun, repeated opportunity of seeing with him several isolated cases of meningitis of a type which he considers to have been present since 1901. No suggestion of grouping, however, occurred nor were there any in which the organism was recovered until the following incidents arrested attention." Dr. Chalmers then goes on to refer in detail to the cases which occurred on and after March 10th, 1906, in many of which Weichselbaum's diplococcus was recovered. Dr. C. Workman informs me that in the post-mortem journals of the Glasgow Royal Infirmary since that date five cases have been recorded all affecting adults: in three cases, Weichselbaum's diplococcus; in one case, the pneumococcus; and in one case, no report. These are the chief facts that have been elicited by the health authorities of the city, and they are of such importance as fully to justify the most scrupulous investigation of all cases of meningitis both by the municipality and by individual medical men.[2]

During the present outbreak of the disease in the city I have had the opportunity of seeing three characteristic cases, one of which you have also watched in the wards and followed to the post-mortem room. The other two I saw in private. It is fitting, therefore, that at this the last meeting of the class for the present summer session I should describe to you the clinical features of these three cases in the course of a formal lecture on this interesting and fatal disease.

CASE 1.—A man, aged 21 years, married, a labourer, was admitted to Ward 12 on May 30th, 1906, at 7 P.M. on account of vomiting, headache, great restlessness, and unconsciousness. Since childhood, with the exception of whooping-cough, measles, and scarlet fever, he had no illness until eight months before admission, when he was away from his work for a week on account of an attack of "black bile," accompanied by vomiting but without unconsciousness. On the evening of May 29th he was suddenly seized with severe sickness and vomiting which lasted continuously for five hours. There was also some diarrhœa and he complained of tenderness and pain in the region of the stomach. The colour of the vomited matter was green at first, but afterwards became black. This attack came on suddenly after he had taken his supper consisting of tea and sausages. Before having his supper he had been in a friend's house, where he drank some whisky out of a bottle. The violence of his illness suggested to his friends that the contents of the bottle might not have been whisky but something poisonous; on inquiry, however, it was found that the bottle had contained whisky. On the morning of the 30th headache was so intense that he could not get out of bed. At 2 P.M. on that day he became unconscious and extremely restless, moving his arms and legs about in an irregular fashion. At 7 P.M. in this condition he was admitted to Ward 12. His mother stated that he had been out of work for about a fortnight, but had not been particularly depressed on that account. He lived at home in a room and kitchen house with his father and mother, both of whom were healthy; his brothers and sisters numbered seven and all were in good health; two others had died in infancy, one from croup, the other from "inflammation of the brain." He was married and had one child, who had died in the Hospital for Sick Children from tuberculous meningitis as ascertained by post-mortem examination there.

On admission to the ward the patient was quite unconscious and extremely restless, so that it was necessary to procure a night-watchman to prevent his falling out of bed. The face was flushed and the tongue was coated with a white fur; the breath had a peculiar offensive odour. There were no herpes and no cough or spit. The pupils were equal and medium and reacted to light. No paralysis was anywhere noted. He frequently passed his hand over the abdomen, so as to suggest that he might be suffering pain in that region, but a careful examination of the abdominal walls, the inguinal rings, and the rectum revealed nothing abnormal. The stomach was washed out; the contents were greenish in colour and contained no free hydrochloric acid. The urine removed by catheter had the following characters: colour, amber; reaction, acid; albumin, present; sugar, present; chlorides, diminished; acetone and diacetic acid, absent. There was no œdema of any part of the limbs or trunk. Kernig's sign was absent. The pulse was 78, the temperature was 99° F., and the respirations were 28. Examination of the circulatory and respiratory systems was difficult on account of the restlessness and struggling, but so far as it could be carried out it pointed to a healthy state of the heart and lungs. Such is the clinical history as recorded by my resident assistant, Dr. McEwan; the subsequent notes of the case were dictated by myself in your presence when we examined him together.

On May 31st, in the morning, the patient was still unconscious and extremely restless, constantly moving the limbs and turning the body from side to side. The unconsciousness was not very deep, as any examination of the patient increased the restlessness. A distinct rigidity of the nuchal muscles was observed. This, indeed, was so great that he could be raised from the bed by the hand placed beneath the occiput, the spine being kept quite rigid during the whole time. Occasionally a slight tendency to opisthotonos was noted. The attempt to raise him in this way also caused him to cry out a little as if he were in pain or discomfort, but he never regained consciousness. The abdomen was markedly retracted and the tache cérébrale was well marked. The skin was of a somewhat oily character; here and there blotches and pimples were noticed but no definite specific rash could be detected. The pulse was of small volume, regular in force and rhythm, and numbered about 100. The respirations were irregular, there being an intermission of varying duration every third or fifth breath. The respirations numbered about 20, although they were somewhat difficult to count owing to the intermissions. The temperature had gone up from 99° on admission to 101° at 1 o'clock and 102° at 8 o'clock this morning. Occasionally a slight twitching of the right angle of the mouth and of the right eyelid was observed. It was impossible to test for Kernig's sign on account of the extreme restlessness. The patient was able to swallow when fluid was placed in the mouth, but the lower jaw was rigid. There had been no vomiting and no diarrhœa since admission. The restless movements sometimes ceased for a few minutes, during which the patient seemed to be asleep. At times during the restless periods he uttered a low moan as if he were in pain. No wound could be discovered on the body and the idea of the disease being tetanus was dismissed. The rigidity of the neck, the unconsciousness, the extreme muscular restlessness, the irregularity of the respirations, and the history of onset with violent vomiting and purging suggesting irritant poisoning on the whole indicated the possibility of cerebro-spinal meningitis. On June 1st the patient was much less restless but greatly more comatose than at the ward visit on the previous day. The pupils were now somewhat dilated and did not respond to light. The eyelids were sealed by a purulent exudation. During the night and the next morning Cheyne-Stokes breathing of a characteristic kind had been present, the respiratory period lasting from seven to ten seconds, the period of apnœa from three to five. The respirations were stertorous. The pulse was of small volume and low tension, numbering 140. The temperature at the time of the note was 103°, having been 104° at 8 o'clock the previous night. No definite petechial rash could be made out, but there was a

[2] On June 30th, the day after this lecture was delivered, Dr. Wright, senior assistant medical officer of health of Glasgow, informed me that the number of cases was 57; that 26 had been subjected to post-mortem examination and 16 definitely associated with Weichselbaum's diplococcus.

slight livid mottling of the dorsa of the feet, a similar condition being noted on the upper part of the front of the chest. A distinct paralysis of the left side of the face and a paresis of the left arm were noted this morning. Retraction of the head was still marked, and any attempt to bring it forward met with the strenuous opposition of the patient. He occasionally placed his hand behind his neck as if holding it for the relief of pain. He swallowed a little milk during the night. The bladder had been quite incontinent, but the bowels had not moved since admission. Examination of the fundi showed slight congestion of the optic discs. After the ward visit on May 31st lumbar puncture was performed and two drachms of slightly blood-stained cerebro-spinal fluid were withdrawn, the admixture of blood being obviously accidental. Part of the fluid was sent to the municipal bacteriological department, and part was examined by Dr. McEwan. On standing a slightly red-coloured faint flocculent deposit settled in the tube, leaving the supernatant fluid perfectly clear. On staining films from the deposit with 10 per cent. fuchsin solution it was found to consist mainly of polymorphic leucocytes in the interior of many of which characteristic diplococci, varying in number from four or five to 20, were beautifully seen. The examination of the cerebro-spinal fluid thus confirmed the diagnosis already arrived at of epidemic cerebro-spinal fever. Dr. R. M. Buchanan of the municipal laboratory also reported that in the specimen sent to him he had detected the diplococcus intracellularis meningitidis of Weichselbaum. The patient sank and died in the course of the evening of June 1st, the temperature having dropped shortly before death to 100°. He had been ill barely three days.

Necropsy.—A post-mortem examination was made on June 4th by Dr. Workman, pathologist to the infirmary, whose report is as follows: "External appearances.—A well-developed and well-nourished body. Post-mortem rigidity is pronounced. On removing the calvarium and reflecting the dura an extensive fibrino-purulent meningitis of the brain is observed, most advanced over the right hemisphere where the effusion is very thick and yellow. The disease does not seem so advanced at the base, but the membranes there are very opaque. The effusion is great between the lobes of the cerebellum behind. On removing the spinal cord the inflammation and effusion are found most pronounced over the lower dorsal and lumbar regions. The organs of the thorax and abdomen are found to present remarkably healthy appearances. The spleen is not enlarged, but there is perhaps a very slight cloudy swelling of the liver. Smears from the purulent exudation of the meninges on being stained show numerous diplococci of Weichselbaum, and the same organisms are found by Mr. J. A. Campbell, assistant bacteriologist to the infirmary, on culture. Weights of organs: heart, 12 ounces; right lung, 28 ounces; left lung, 22 ounces; liver, 58 ounces; spleen, 4 ounces; kidneys together, 12 ounces."

The post-mortem examination of this case fully verified the diagnosis at which we had arrived during life. I shall now shortly describe to you two other characteristic fatal cases occurring in the same family which I saw in consultation with Dr. Joseph N. Glaister on the evening of April 17th last. I shall simply read to you the notes which I made at the bedside and afterwards transcribed into my case-book immediately on returning home.

CASE 2.—Alice ——, aged three years, was well enough till Saturday afternoon, April 14th, when in the early evening, about 5 o'clock, she was observed to be heavy and dull. She then went out for a walk with her parents but had to be carried home and put to bed; since then she had been quite prostrate. All the Saturday night she was restless and perspired very much. Her mother poulticed her, thinking she had caught cold. Severe vomiting began on Sunday the 15th, at 2 o'clock P.M., and continued till Monday night. There was no diarrhœa but one good, though constipated, motion had been obtained on the 15th as the result of castor oil. On the evening of the 16th restlessness became more marked and retraction of the head was first noticed. When I saw her on the 17th the retraction of the head was very distinct and the nuchal muscles were very rigid. The child was still very restless, rolling about in her nurse's lap, and unconscious, or very lethargic. The pupils were dilated but responded slightly to light; slight squinting was now observed for the first time. The pulse was 120 and regular; the temperature was 101° F.; the respirations were 26 and occasionally of Cheyne-Stokes type. A few doubtful spots were observed on the trunk but their nature was difficult to determine in the gaslight. The tongue was dry and covered with a thick white fur.

The child, after improving somewhat, relapsed and died on May 5th, after 22 days' illness. On the 7th I was present along with Dr. Glaister, Professor J. Glaister, Dr. Chalmers, and Dr. J. Browne of Belvidere at the post-mortem examination, which was performed by Dr. Buchanan. The appearances revealed were typical of cerebro-spinal meningitis. The convolutions of the convexity were flattened and dry and here and there a little yellow exudate was observed in the sulci. The fluid in the ventricles was excessive in amount and presented an opaque grey appearance. A thick layer of pale yellow exudation enveloped the pons Varolii and upper part of the medulla oblongata, extending backwards on either side over the lower surface of the cerebellum. On the posterior surface of the dorsal region of the spinal cord there was a thick layer of yellow fibrinous exudation. Cultures were made by Dr. Buchanan from the exudate and from the cerebro-spinal fluid with, I understand, positive results.

CASE 3.—Maggie ——, aged eight years, sister of the foregoing patient, remained quite well till about 2 or 3 o'clock P.M. on Sunday, April 15th, the day after her sister turned ill when she sat on the fender and shivered. She was at once put to bed, and at 5 P.M. she seemed a little better and went to sleep till about 7 P.M., after which she became very restless and remained so all night. On Monday forenoon severe vomiting began, continuing till shortly before my visit on the evening of the 17th. I saw the vomited matter at that time and it had a black tarry appearance. At this time also there were very marked retraction of the head and extreme restlessness. She was extremely lethargic and the temperature was 103° F. The pupils were wide and responded to light. A number of round red spots were noted on the front of the chest and abdomen. The bowels had been moved by medicine and the motions were also said to have been somewhat tarry in appearance. This child died about four days later. No post-mortem examination was made, but Dr. Buchanan obtained Weichselbaum's diplococcus intracellularis from the opaque cerebro-spinal fluid obtained after death by lumbar puncture.

The violence of the initial vomiting in these two cases, just as in the case we observed together in Ward 12, raised at first the question of the possibility of irritant poisoning as the cause of the symptoms. After careful inquiry, however, Dr. Glaister and myself agreed that this hypothesis might be set entirely aside and that the disease from which the little patients were suffering was acute cerebro-spinal meningitis. We further agreed that the cases should be reported to the medical officer of health. This was done by Dr. Glaister next morning and with reference to the presence of a rash in these cases Dr. Chalmers, who afterwards saw the patients with Dr. Glaister, writes in his memorandum as follows: "In the children forming Group 2 above noted a limited number of spots were present on the skin from the third day of their illness. These were few in number, petechial in character, and irregularly distributed. In one child they were present on the abdomen and ankle, in the other on the neck and upper part of the chest and on the inner aspect of the thigh and ankles. They were more pronounced than a typhus rash and much more limited in distribution."[3]

The epidemiological history of cerebro-spinal fever has been written in numerous monographs and reports during the nineteenth century and it is impossible to enter into a detailed discussion of this interesting subject now; it will be sufficient if I refer you to the chief sources of information on this point. Perhaps the most complete of the earlier accounts is that of Hirsch, contained in the third volume of his "Historical and Geographical Pathology," as translated into English by the New Sydenham Society. A good historical outline is also contained in Edward W. Collins's "Report upon Epidemic Cerebro-spinal Meningitis" published in the *Dublin Quarterly Journal of Medical Science*, vol. xlvi., 1868, p. 170. Among more recent contributions undoubtedly the best is the Report on Epidemic Cerebro-spinal Meningitis prepared for the Massachusetts State Board of Health by Councilman, Mallory, and Wright in 1898 dealing with the outbreak in Boston in 1896–97, during which 111 cases were

[3] In THE LANCET of July 7th, 1906, p. 47, Dr. Chalmers has added to this statement by saying that since it was published he has seen a case in a child in which "the features of a typhus rash were exactly reproduced within limited areas of the skin" on the fourth day from the onset.

minutely investigated, clinically, pathologically, and bacteriologically. Hirsch divides the epidemic prevalence of the disease in the nineteenth century into four periods: (1) 1805–30, the outbreaks being chiefly in the United States; (2) 1837–50, chiefly in France and Algiers; (3) 1855–75, chiefly in Germany; and (4) 1875 till the present time.

Up to 1868 the appearance of the disease in Great Britain was, according to Collins, confined chiefly to Ireland where in the majority of the workhouses of the country it first occurred in 1846; a remarkably fatal outbreak also began in 1866 and lasted till the date of his report 1863. Writing in that year Collins states: "Cerebro-spinal meningitis has never become epidemic in England. Indeed, so rarely has it been observed there that the fact of its occurrence in that country might almost be passed over in silence." Sporadic cases had, however, been reported from 1807 onwards. "If," he continues, "we now glance at the diffusion of cerebro-spinal meningitis upon European soil during the present century, we find that Turkey, Greece, Belgium, Scotland, Iceland, and Russia alone, so far as our present limited information warrants such an assertion, have remained unscathed." Probably the first outbreak to be recorded in Scotland in detail was that occurring in the village of Galston in Ayrshire reported by Dr. W. Frew, now of Kilmarnock, in the *Glasgow Medical Journal*, July, 1884, p. 21. I remember being present at the meeting of the Glasgow Pathological and Clinical Society at which Dr. Frew read his paper and of seeing specimens which he had sent to Dr. Joseph Coats from his post-mortem examinations.[4] I have seen one or two other sporadic cases, but I know of no other epidemic outbreak in the West of Scotland since then.

In the Massachusetts report the authors remark that, "as a rule, none of the epidemics has shown a continuous extension," and that "the outbreaks of the disease have been seen as perfectly isolated epidemics in places which had hitherto been free from it." Many of the epidemics have not embraced more than from four to six cases, and most of the accounts concern only sporadic cases. All the epidemics have been most marked in the winter and spring and the disease attacks chiefly children and young adults. Epidemics have also been frequent in garrisons and in convict prisons, sometimes, indeed, limiting themselves to the military and sparing the civil population. One of the most striking features of the epidemiology of cerebro-spinal fever is the limited number of cases and the isolated character of many of the outbreaks. As regards the earlier accounts one wonders whether all the cases recorded were really to be regarded as examples of cerebro-spinal fever, particularly such cases as could be designated "spotted fever." Murchison and others believed that epidemic cerebro-spinal fever was but a modification of typhus fever, and although it must now be admitted that this is not so it is quite likely that cases of typhus fever were included in the statistics of earlier epidemics. By the use of the lumbar puncture we are now able to be much more accurate in diagnosis. In the epidemics which have occurred during recent years in Europe and in America the numbers of cases have been relatively large. In Silesia in the spring of 1905, 1953 cases were recorded with a death-rate of 50 per cent.; the disease had been absent from Silesia for 30 years. In New York in February, 1905, deaths to the number of 149 occurred, and a commission was appointed to devise measures of prevention; in the same city in 1872 there were recorded 990 cases with a death-rate of 77 per cent. During the first seven months of 1898 in Chicago close upon 200 cases were observed and a report on the disease was prepared by Dr. W. J. Class and published in the *Journal of the American Medical Association*, March 25th, 1899. Addressing the centennial meeting of the Medical and Chirurgical Faculty of Maryland in April, 1899, Professor W. Osler called the affection an "American disease," and referred to the value of lumbar puncture in establishing the diagnosis.

Such facts as I have mentioned, and they might be multiplied indefinitely, fully establish the epidemic character of the disease. But there still remain for consideration the sporadic cases. These, though perhaps rare in occurrence, are apparently always with us. Are they of the same nature as the epidemic disease? I think undoubtedly that some of them are. In a number of sporadic cases an organism similar to Weichselbaum's diplococcus has been discovered and in others the pneumococcus has been present. In London there has long been recognised a form of meningitis which has been designated posterior basic meningitis or cervical opisthotonos, an affection which has been carefully investigated by Still and Hildesheim.[5] In some of these an organism closely resembling the diplococcus of Weichselbaum has been discovered. It is perhaps, however, as yet impossible to say whether the sporadic is essentially the same as the epidemic disease, but so far as I can judge from the evidence at present before me I think they are. If this be so, then we have to recognise the fact that cerebro-spinal fever may not only be epidemic but also endemic; that as regards its prevalence in the community it may somewhat resemble pneumonia: it may be always with us and yet liable to epidemic outbreak.

As regards the bacteriology of epidemic cerebro-spinal fever there is still difference of opinion as to whether it is caused by one specific organism or not. There can be no doubt that cerebro-spinal meningitis is capable of being produced by several micro-organisms—the pneumococcus, Weichselbaum's diplococcus intracellularis meningitidis, the tubercle bacillus, the streptococcus, &c. In many of the cases due to other organisms than the diplococcus intracellularis the meningitis is secondary and so may be excluded from consideration in the investigation of the etiology of epidemic cerebro-spinal fever. Jaeger, Heubner, and Councilman, Mallory, and Wright incline to the view that the epidemic form of cerebro-spinal meningitis is caused by Weichselbaum's diplococcus alone, whilst Netter, who has written largely and well on the subject, does "not in any way accept this view," and he regards it as "even possible that the diplococcus intracellularis may be a degenerated form of the pneumococcus."[6] In this connexion it may be interesting to quote the conclusions of G. Canby Robinson, of the Ayer Clinical Laboratory, Philadelphia, who has made one of the most recent investigations into the bacteriology of epidemic cerebro-spinal meningitis.[7] "In a study of 15 cases of epidemic cerebro-spinal meningitis the organism isolated from the spinal fluid, circulating blood, pus from the conjunctiva, and from the central nervous system at autopsy, agrees in all respects to the diplococcus intracellularis meningitidis of Weichselbaum. It was isolated in pure culture from the spinal fluid of the 14 cases in which lumbar puncture was performed and is to be considered the causal agent in all the cases." It is therefore, perhaps, impossible at present to be absolutely certain that the diplococcus intracellularis is the specific organism of epidemic cerebro-spinal fever, but notwithstanding the able ratiocination of Netter I am inclined to think that the further investigation, which is still necessary, will prove that it is so. Certainly from the clinical point of view, and so far as the bedside phenomena of the cases here recorded go, there seems to me to be little doubt that epidemic cerebro-spinal fever is as specific as typhus fever.

Netter is a firm believer in the contagious nature of epidemic cerebro-spinal meningitis, but points out that the earlier observers of the French epidemics had little belief in it. It is admitted, however, that "the degree of contagiousness is less marked than that of most of the other infectious diseases." In this respect it may be said to resemble tuberculosis or enteric fever as regards its contagious quality. As regards the mode of contagion, some believe that the poison may be conveyed in the excretions from the nose. Quite recently also Canby Robinson reports that he has isolated the diplococcus intracellularis meningitidis from the pus of the purulent conjunctivitis which sometimes complicates epidemic cerebro-spinal fever, as it did in our first case. A number of observers believe that the path of infection may be by way of the lymph spaces of Axel Key passing "through the fronto-ethmoid foramen or the cribriform plate of the ethmoid bone." While admitting the possibility of direct nasal infection, Netter believes "that the pathogenic agents most frequently reach the meninges by way of the blood, and that they enter this fluid from the pulmonary alveoli." Such observations teach us that the excretions from the nasal cavity and from the conjunctivæ are highly dangerous, and that in the nursing of every case of cerebro-spinal meningitis careful provision should be made for their thorough disinfection. As regards the first case reported in this lecture Dr. Chalmers kindly ascertained for me the following facts which may have a bearing

[4] A summary of Dr. Frew's papers by Dr. Wright and Dr. Archibald will be found in THE LANCET of June 30th, 1906.

[5] THE LANCET, April 15th, 1905, p. 1010; also May 20th, 1905, p. 1332.

[6] Twentieth Century Practice, vol. xvi., 1899, p. 191.

[7] Bulletin of the Ayer Clinical Laboratory of the Pennsylvania Hospital, Philadelphia, Pa., No. 3, June, 1906, p. 27.

upon the question of contagion. The patient in Case 1 had a baby boy who died in the Sick Children's Hospital on April 21st, 1906, certified "meningitis"—tubercular (P.M.). He is said to have kissed the child after death. Further, it was found that a child, aged five years, a cousin of the patient, died on May 10th, 1906, certified as "probably meningitis." He visited this child's house and is said to have also kissed the child after death. Of course too much cannot be made of this in support of the doctrine of contagion but the circumstances are at least of interest in connexion with the patient's own illness and death, and they certainly indicate that it may be dangerous for the parents and relatives of children suffering from meningitis to kiss them.

The diagnosis of cerebro-spinal fever while the disease is prevailing in epidemic form should not be difficult, although it must be admitted that sporadic cases from the likelihood of their being confused with the ordinary meningitis of infancy and childhood may give some trouble. Cases such as those described in this lecture present no great difficulty in diagnosis and would not, I think, do so even if they had occurred as sporadic cases. The onset as sudden as that of pneumonia, the rigor, the violent initial vomiting raising sometimes the suspicion of irritant poisoning, the headache of excruciating severity, the restlessness and rapid onset of unconsciousness, the retraction of the head and manifestations of pain on attempts to bring it forward, the occasional presence of a petechial rash, and Kernig's sign make up a clinical picture the significance of which cannot easily be mistaken. In *foudroyant* cases the passage of the patient in the course of a few hours into a state of coma and extreme danger is one of the most striking phenomena of the disease. Yet it is possible that symptoms very similar to these and due to other causes altogether may sometimes be met with and lead to a diagnosis of cerebro-spinal meningitis when that disease is not present. Such a case occurred in Ward 7 during the past winter. I made a diagnosis of cerebro-spinal meningitis, in which my colleague Dr. George S. Middleton agreed. The symptoms had caused my resident to think of typhus fever; I saw the patient only once and he died within 24 hours of admission, the illness having lasted only three days. The post-mortem examination proved that the case was one of fæcal impaction and poisoning and that the brain and spinal cord presented healthy appearances. The following are the notes of the case.

CASE 4. *Fæcal poisoning erroneously diagnosed as cerebro-spinal meningitis.*—A man, aged 20 years, was admitted on Dec. 31st, 1905, and died on Jan. 1st, 1906. He had been suffering from an illness of three days' duration. The history of the illness cannot be obtained at present but the following details are supplied by Dr. S. C. Cowan of Kirkintilloch who had sent in the patient. "Illness began three days ago, when giddiness and weakness of the legs were complained of. Ankle clonus is very marked and the other reflexes are exaggerated. Temperature has been above normal. Pulse 120. Bowels have been freely moved. Intense thirst has been present. Urine normal. Tongue has been dry from onset." His condition on Dec. 31st at 7.30 P.M. was as follows. The temperature was 97° F., the pulse was 102, and the respirations were 30. The patient lay on his right side and was practically unconscious. The breathing was very laboured, marked muscular effort being used to get each breath in. There was movement of the jaw, nose, and throat with each respiration. The face was flushed and the ears were very livid. The pupils were moderately contracted but became smaller under a strong light. In watching them they were seen to contract slightly with each respiration. The conjunctivæ were clear. The tongue was exceedingly dry. The general condition was that of a strongly-built, rather spare man. The extremities were very cold. The skin was in a dirty condition on admission: on inspection afterwards there was seen a mottled appearance consisting of small patches of brownish pigmentation to be found on all parts of the body but not the face. The colour was very faint on the chest, abdomen, and back, and was more marked on the limbs. It was very specially distinct on the dorsa of the feet where the colour was a distinct brown. Along with this mottling there were definite spots, small red papules, slightly elevated, and disappearing on pressure. These were very scattered, being most marked on the forearms but also present on the chest, the abdomen, the back, and the legs, and there were one or two on the brow. Owing to the restlessness of the patient a detailed examination of the various viscera was not possible and it was necessary to provide a male nurse to watch at his bedside. There was pulsation in the third and fourth spaces of the heart, the apex beat seemed to be in the fourth, three inches to the left. The cardiac dulness was certainly not enlarged. The sounds were pure. The lungs were resonant all over and the respiratory murmur was vesicular and free from adventitious sounds. The abdomen was tympanitic and well formed. There was no enlargement of the liver or the spleen. As regards the nervous system, the knee and Achilles tendon jerks were exaggerated, as were also the tendon reflexes in the arms. Ankle clonus was obtained by the medical man who sent the patient in but was not now found. No plantar reflex was obtained. Sensation could not be tested. On ophthalmoscopic examination of the right eye the fundus was found to be normal. No urine had been passed since admission (12 noon). The rectal temperature taken afterwards had not risen above 95°. On Jan. 1st the patient continued in the same collapsed condition all day. The lividity of the whole body became more marked and the temperature would not rise at all in the thermometer, even when taken in the rectum. At 6 P.M. the breathing became worse and the patient gradually sank. There was at no time retraction of the neck or opisthotonos. The body, however, was somewhat rigid, but in a flexed state. Restlessness was a marked feature throughout but the patient never regained consciousness. The conjunctivæ remained clear throughout. No urine was passed. At the visit this morning I considered the blue mottling a "*tâche bleuâtre*," and the case was diagnosed as probably cerebro-spinal meningitis. This opinion was also expressed by Dr. Middleton.

Necropsy.—The following are the notes of the post-mortem examination: "Ptomaine poisoning from extensive fæcal accumulation in ascending and transverse colon. Descending colon and rectum empty. The weights of the various organs are: heart, 9½ ounces; right lung, 19 ounces; left lung, 13½ ounces; liver, 56 ounces; spleen, 2½ ounces; and kidneys, each, 4 ounces. The body was cyanosed and covered with a macular livid eruption, spots varying in size, mostly large. Death was thought to be due to cerebro-spinal meningitis. The heart was small and the pulmonary valves were competent and healthy. The mitral and tricuspid valves were healthy and of normal size. The lungs were emphysematous and congested. The spleen was small. The liver was fatty and congested. The kidney capsule was adherent in places. The pyramidal area was relatively congested. The stomach showed areas of ecchymosis. The intestines were generally congested. There was no enlargement of Peyer's patches. The cæcum was much distended and full of fæces. The whole ascending colon was distended with firm fæces. In the transverse colon were masses of fæces of the size of a walnut. The descending colon was empty. An intussusception was found in the small intestine, probably post mortem. The mucous membrane of the cæcum was greatly thinned and congested and in a few places was sloughing. There were patches of great congestion over the large intestine. There were no exudate at the base of the brain and no increase of fluid in the lateral ventricles; it presented a very healthy character. The spinal cord presented no exudation and was apparently healthy."

I have thought it right to record this error of diagnosis as it proves, that other toxæmic conditions may give rise to symptoms not unlike those of cerebro-spinal meningitis but which would not be likely to give rise to error if the disease were known to be epidemic at the time. That this is not the only error of the kind that has been made is proved by a case shortly recorded in THE LANCET.* During an outbreak of epidemic cerebro-spinal fever in Egypt one case was diagnosed by several medical men as of this nature and arrangements were being made to perform lumbar puncture when the patient passed 36 ascarides lumbricoides, after which he rapidly got well.

The diagnosis of epidemic cerebro-spinal meningitis from tuberculous meningitis in the case of young infants may cause considerable difficulty; in older children the difficulty should not be so great. In the latter affection the gradual onset, the less severe gastric symptoms, the somewhat slow evolution into a critical condition, the late development of delirium and coma, and the usual absence of retraction of the head and of Kernig's sign should help us in our efforts at diagnosis. But whenever there is a doubt the lumbar puncture should be resorted to. It is quite possible that the

* THE LANCET, March 17th, 1906, p. 799.

posterior basic meningitis or cervical opisthotonos of Great Ormond-street, of which half the cases occur in infants under one year, may possibly yet turn out to be examples of sporadic epidemic cerebro-spinal meningitis, although on the whole Hildesheim inclines to the view that they are not.

As regards prognosis, I may only add that from 30 to 50 per cent. of cases of epidemic cerebro-spinal meningitis may be recovered from, often with some nervous, functional, or paralytic defect left behind. The duration of the disease may vary "from two days up to 74 days," six and a half days for acute and 28½ days for chronic cases being perhaps an accurate average.[9] The same writers further state that "we believe that all infections of the meninges other than the diplococcus intracellularis are fatal," adding, however, that this belief must be confirmed by "examination of the exudation obtained during life by spinal puncture."[10] With this belief I am in perfect agreement, especially as regards tuberculous meningitis, and the rare cases which in practice I have seen of recovery from apparently tuberculous meningitis have now to me assumed a new aspect.

In conclusion as the result of my study of this interesting disease, specially interesting to us in Glasgow at the present time, I may venture to formulate the following propositions:—(1) That sporadic epidemic cerebro-spinal meningitis or fever is probably more frequent in our midst than we have hitherto supposed; (2) that epidemic cerebro-spinal fever is to be regarded as a specific disease and that it is in all probability caused by the diplococcus intracellularis meningitidis of Weichselbaum; (3) that in many cases the diagnosis can only be rendered certain by lumbar puncture; and (4) that all personal contact with the sick of such a nature as to render possible contamination by the excretions from the nose or the conjunctivæ should be strictly avoided and that all such discharges should be thoroughly disinfected.

THE SUBMUCOUS (OR WINDOW) RESECTION OPERATION FOR CORRECTION OF DEFLECTIONS OF THE NASAL SEPTUM.

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THE advent of the "fenster" resection or "window" operation may be said to have revolutionised the treatment of deviations and other deformities of the nasal septum. Among other deformities may be mentioned the projections known as spurs or crests. The practice of removing these obstructions by sawing them off has practically been superseded by the window operation. The skeletonising of the cartilaginous and bony septum, which is an essential part of the submucous resection, allows of a much more accurate estimate of the nature of the deformity and shows that what were formerly regarded as ledge-like outgrowths of bone or cartilage, or both, are in reality but the thickened angular summits of septal deflections. This demonstrates clearly the reason why the results of attempts to saw off the obstructing "spur" were frequently so disappointing, as, for instance, on examining the piece thus removed the greater part of it would be found to consist of mucous membrane with only a small shaving of bone or cartilage, and consequently the patency of the naris would not be materially increased; on the other hand, if the operator were determined to be thorough a considerable perforation would result, the angle of the deflection having been sawn through instead of what was apparently a solid ledge.

It would be waste of space to review in detail the various operations which have been devised and performed for the cure of nasal stenosis due to malposition and deformity of the septum, but it may be safely said that none of these could be looked upon as wholly satisfactory; for the bending operations, such as Adams's, usually failed in their object owing to the resilient cartilage returning to its faulty position, and the cutting operations, such as those of Asch or Moure, although they might relieve the stenosis, yet were apt to leave a permanent perforation of considerable size. This, though it was claimed to be no disadvantage to the patient, nevertheless could not be looked upon as an entirely satisfactory result. The "window operation" is free from both these objections: the septal deformity is permanently corrected and if due care be taken the risk of a permanent perforation is extremely small. Briefly defined, the "fenster" resection consists in making an incision or incisions on the convex side of the deviation and separating the mucous membrane from the cartilage and bone over the whole area of the deviation. A vertical cut is then made through the cartilage, taking care to avoid perforating the mucosa on the concave side. Through this slit an elevator is introduced and the mucous membrane is stripped off the concavity. The whole of the deviated portion of the septum being freed from mucous membrane is now removed, either by special knives for the purpose or with punch forceps. The flap removed from the convexity is replaced so that its inner surface comes into contact with the inner surface of the mucosa of the other side, which now, instead of being concave, hangs straight like a curtain in the middle of the nasal cavity. The two raw surfaces adhere readily and the wound in the mucous membrane is usually healed in a week or ten days.

The following are the essential details of the operation:—

Anæsthesia.—If the patient be of stable temperament and it can be ascertained that the deflection is situated quite anteriorly, involving the cartilage only, and consequently the operation can be easily and quickly completed, I prefer to operate with cocaine anæsthesia only. If two plugs of absorbent cotton-wool saturated with a solution of cocaine 20 per cent. and adrenalin 1/0 per cent. be placed in contact with, and on each side of, the septum and kept in position for not less than 20 minutes, the operation can be performed without any sensation of pain, and the addition of the adrenalin renders the procedure almost bloodless. If the patient, however, be nervous and not to be relied upon for self control—moreover, if the deflection extends far back, involving bone, and the appearance is such that the operation is likely to prove long and tedious—it is advisable to have resort to a general anæsthetic. In this case it is necessary also to apply adrenalin to the area to be resected for not less than 20 minutes before beginning to operate. I am of opnion that gas and ether is the best to commence with, and after the patient is "well under" the anæsthesia should be maintained by chloroform. A light anæsthesia is sufficient—just enough to keep the patient quiet.

Position.—The recumbent position with the head slightly raised will serve well, except for the removal of the lower part of the deflection—i.e., the lower border of the vomer and the incisor crest running along the floor of the nose. For this, in order to see satisfactorily, it is necessary to have the patient sitting up. On the whole I prefer the sitting up position from the commencement. It has also this advantage, that if there be any bleeding the blood escapes anteriorly instead of flowing into the naso-pharynx, as it does in the recumbent position.

Light.—The interior of the nose can be amply illuminated by means of the rays from an ordinary focal electric lamp (32 candle-power) reflected from a head mirror. Some operators prefer a Kirstein's electric head light, but of this I have no experience. It is said to be an advantage for the operator to be independent of a fixed light for reflection, and that because the rays from a Kirstein's lamp are parallel to those entering the eye a more perfect illumination of the deeper parts of the interior of the nose is obtained.

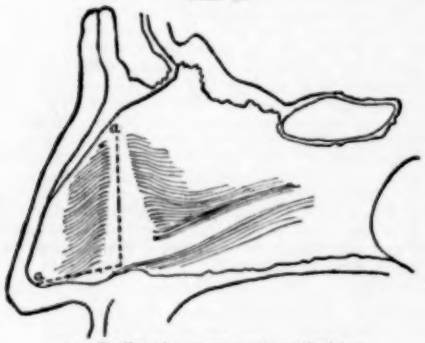
Assistance.—It is necessary for an assistant to hold the patient's head steady and to vary its position from time to time according to the requirements of the operator. An assistant can also render aid by holding the speculum, or special retractors, which are preferred by some for keeping open the naris. I have been in the habit of using an ordinary Thudicum's speculum, of as large a size as possible, and have found that it answers the purpose perfectly well.

Incisions in mucous membrane.—It is, I think, universally agreed that it is best to commence the resection from the convex side. I have found that for the more usual deflection with a vertical and horizontal angle, an L shaped incision—as advised by Freer—(Fig. 1) best answers the requirements. The vertical limb should be made along the summit of the vertical angle of deflection, should commence high up in the septum above the deviation, and should extend to below the horizontal portion of it. The horizontal cut should be made from the base of the vertical and be carried forward along the lower border of the septum till it is well in front of the deflection. The L shaped incision has

[9] Councilman and others: American Journal of the Medical Sciences, vol. cxv., 1898, p. 259.
[10] Loc. cit., p. 270.

this additional advantage, that it does not correspond to the slit in the cartilage, which latter is made considerably anterior to it, and therefore when the flap is replaced it well covers what becomes the anterior border of the window, so that if in making the anterior slit in the cartilage the

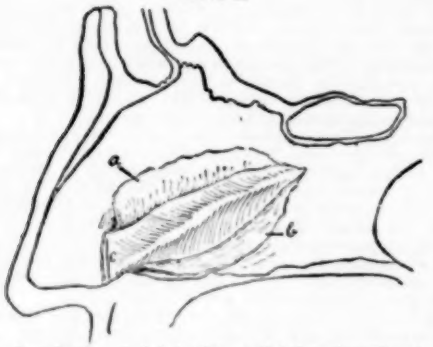
FIG. 1.



a, *a*, Outline of mucous membrane incision.

mucosa of the opposite side be accidentally perforated the wound will be completely overlapped by the shaped flap and a permanent perforation avoided. Other incisions may be made to suit individual circumstances and varying conditions, such as, for instance, in a purely horizontal, crest-like deflection, an incision extending along the summit, with a short vertical one anterior to the commencement of the deflection, enables a superior and inferior flap of mucous membrane to be stripped off (Fig. 2).

FIG. 2.

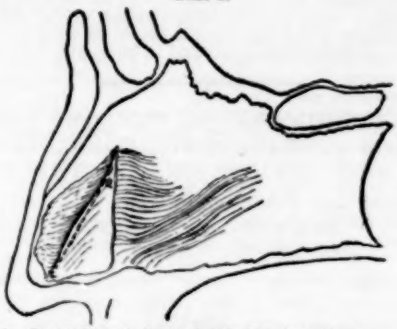


a, Superior flap. *b*, Inferior flap. *c*, Cut through cartilage in front of deflection.

In making these incisions care should be taken to avoid perforating the cartilage. This is not an unnecessary precaution, as where the cartilage is very thin, as it sometimes is, it is very easy, especially with a pointed knife, to perforate it. For this reason it is well to use a special knife with a round-edged blade. Freer lays considerable stress on the necessity for thoroughly cutting through the muco-perichondrium, so that it may be raised from the subjacent cartilage. He says that if the perichondrium has not been divided on attempting to bare the cartilage the elevator will pass between the mucous and perichondrial layers, and it will be found to be an exceedingly difficult task to separate the mucosa from the perichondrium, whereas, as a rule, the whole muco-perichondrium can be raised without much trouble and frequently with surprising ease.

Separation of mucous membrane.—The flap outlined by the incisions is now stripped off the cartilage. This can usually be readily accomplished with a small, thin spatula, blunt-edged, and curved slightly on the flat. This curve facilitates working forwards from the vertical incision. In some cases there is considerable adhesion between the soft covering and the cartilage. The parts where adhesions are most frequently met with are the anterior region of the triangular cartilage, the summits of the angles of deflection, and along the incisor crest. In these cases the mucosa must be carefully dissected off and for this purpose a sharp edged spatula is preferable, a perforation being less likely to be produced than by the blunt-edged instrument. After having bared the cartilage over the area outlined by the incisions the part of the deflection behind the vertical angle is stripped of its covering by inserting the spatula beneath the mucosa and freely separating it until the whole of the convex side is denuded. A vertical slit is now made in the cartilage anterior to the commencement of the deflection (Fig. 3). This has to be done with great care in order to avoid cutting through the mucosa of the concave side. It is best effected, I think, with a knife having a round-edged blade, the same, in fact, as previously mentioned for making the primary incisions. A finger should be placed in the opposite nasal fossa in order that it may feel the knife before it can cut through the mucous membrane. Through this slit the spatula is introduced and the mucous membrane of the concavity separated from its attachment. There is no greater difficulty in doing this than in clearing the convex side, though frequently the mucosa is firmly adherent in the deepest part of the hollow and the sharp-bladed spatula will have to be employed. With a speculum in the nostril of the concave side, the instrument can be seen working its way beneath the mucous membrane, and it is well, in order to avoid a perforation, that the curve of the spatula should look towards the cartilage, as in this way the edge is kept close to its surface. The operator should now

FIG. 3.



Dotted line *a* indicates first incision in cartilage.

assure himself that he has thoroughly separated the soft tissue from the area of deflected septum. This is most important, as if any of the mucosa remain attached it will be torn when the piece of septum is removed. Reliable indications of sufficient separation are the disappearance of the concavity and the straight curtain-like hang of the mucous membrane (Figs. 4 and 5). It now remains to remove the deflected portion of septum, which may be punched out piecemeal with Gruenwald's forceps, or some modification of this. Some operators speak highly of Killian's knife, which is a fork-shaped instrument with a small blade between the prongs of the fork, and is used for making the horizontal cuts at the top and the bottom of the deflection. Personally, I have found that the two horizontal and the posterior vertical incisions can be made very readily by employing two knives (designed by Freer) with short (about four millimetres) pointed blades at right angles to a long slender shaft. One is made so that it may be introduced under the mucous membrane to well behind the deflection; its point is turned towards the cartilage and a cut made from above downwards, dividing the cartilage behind the deflection. The blade of the other knife is so arranged that by inserting it to well behind the deviation and drawing it forward the cartilage is divided horizontally. Two of these horizontal incisions should be made, one above and the other below the deflection. It should now be possible to seize the portion of septum included by these incisions and to remove it in one piece. If the deformity were entirely cartilaginous the operation would now be completed and nothing remain to be done except to replace the flaps on what was the convex side. However, it frequently happens that the deflection extends into the bony part of the septum and when this is so its removal is

rendered more difficult and tedious. The little rectangular knives which cut through the cartilage so readily are not applicable here. As a rule, all the upper part of the deflection may be cut away piece by piece with punch forceps without much difficulty. The most troublesome part to remove is the lower border of the vomer and the ridge of bone (incisor crest) with which it is articulated. This is

FIG. 4.

Showing the concavity before separation of the mucous membrane.

frequently included in the deflection, is very thick and hard, and forms a considerable part of the obstruction, so that its removal is absolutely necessary if a perfect result is to be looked for. In my experience I have not been able with the punch forceps to make any impression on this hard ridge. The two instruments which have proved most serviceable in my hands for this work are Killian's bayonet-shaped gouge and Bosworth's nasal saw. With the latter, even

FIG. 5.

Showing the straight "hang" of the mucous membrane after separation.

if one does not cut completely through the bony ridge, if a groove be made on each side, the attachment is weakened, and if then seized with punch forceps it can be broken off. The operator should now satisfy himself that he has thoroughly removed the deflected portion of the septum. If this be so, the flap on the convex side will hang down straight when replaced, the nasal passage on this side will appear freely patent, the posterior wall of the pharynx being readily seen, and on the concave side the hollow should be effaced. This is an important point, as if sufficient bone has not been removed the result is likely to be disappointing. The flaps are now replaced, and in order to keep them in position until adhesion has taken place it is a good plan to pack lightly the nasal fossa with short lengths of gauze (about two inches) wrung out in solution of peroxide of hydrogen (ten volumes) and laid one over the other. Done in this way, the gauze can be removed more easily, and if previous to attempting withdrawal it be moistened with peroxide of hydrogen there will be no likelihood of dragging the flaps out of position. The packing may be left in for 48 hours. It should then be carefully withdrawn piece by piece. All that is necessary in the way of after-treatment is to spray the nasal fossæ daily with an alkaline solution. Occasionally I have deemed it wise—in cases where the cavity was somewhat narrow and owing to swelling of the tissue there seemed to be some danger of the granulations at the edge of the flap contracting adhesion with the opposite turbinal—to insert a thin, nasal celluloid splint. This can be worn as long as may be considered necessary without causing any irritation. The advantage of the resection is more fully appreciated by the patient after about a month or six weeks, when the swelling incidental to the operation has completely subsided.

It has been contended by some that the time taken by the operation (sometimes between one and two hours) is a serious drawback, but I think no one who has had any experience of these cases can deny that the time is well spent and amply compensated for by the very excellent results which are obtained.

In conclusion, I have to acknowledge indebtedness to Dr. Otto Freer of Chicago for kindly permitting me to reproduce some of the diagrams from his valuable monograph.[1]

Queen Anne-street, W.

PRESENCE OF THE BACILLUS TYPHOSUS OR A CLOSELY ALLIED ORGANISM IN A SAMPLE OF DISTILLED WATER SUSPECTED TO HAVE CAUSED TYPHOID FEVER.

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THE origin of so-called "sporadic" cases of infectious disease are rarely so fully investigated as they deserve. In a large number of instances the source of the infection is never traced, the medical officer of health either failing to find a clue or not having the necessary time to make a prolonged investigation. There can be no doubt, however, that careful and systematic inquiries into the source of infection in such cases would often lead to results of great epidemiological interest, throwing light on their origin and possibly revealing hitherto unsuspected modes of infection. The present article deals with one of these sporadic cases, the origin of which is fairly conclusively traced to the use of distilled water for potable purposes, and the investigations revealed also the possible means whereby the water or the vessel containing it became infected.

Towards the end of March last a man, aged 30 years, was notified as suffering from typhoid fever. On the seventh day of his illness his blood gave but a partial reaction with Widal's test, on the eleventh day the reaction was more marked, and about a week later the reaction was decided even with a dilution of 1 in 200. The clinical diagnosis was therefore fully confirmed and there could be no doubt about the nature of the case. There were no other cases in the neighbourhood, nor had there been any for a considerable period, and as we are no longer satisfied with the mere discovery of slight drainage defects as explaining the origin of these isolated cases very careful inquiries were made to ascertain whether any article of food or drink was, or had been, used by the patient but not by other members of the household. It was found that the patient alone used distilled water, drinking about a pint first thing every morning. The water was obtained in stone jars with wooden taps and the evidence was volunteered that the water was sometimes seen to contain a little fluffy material and that the jar had a suggestive odour of ginger-beer. It seemed barely possible that this water could have any connexion with the disease, but as no other more probable source of infection could be found a sample of it was taken for bacteriological

[1] Annals of Otology, Rhinology, and Laryngology, June, 1905.

examination. Various quantities of it were added to taurocholate glucose broth and the mixture was placed in the incubator. Quantities of five cubic centimetres and upwards produced acid, but no gas, and upon examination in the hanging drop it was found swarming with an actively motile bacillus which did not stain by Gram's method and which "clumped" when mixed with one-fortieth part of the serum from the patient's blood. From this growth plates were made on Conradi and Drigalski's medium when an abundance of colonies were obtained exactly resembling those of the bacillus typhosus. These results were so significant that whilst further bacteriological work was being undertaken inquiries were instituted with reference to the source from which the distilled water was obtained. The maker was interviewed and it was then ascertained that he had supplied a number of bottles of distilled water to a chemist in a town where typhoid fever was epidemic and that the bottle which contained the implicated water had been returned from this town. It was asserted, however, that the bottles were thoroughly steamed before being refilled and again sent out. This steaming does not appear to have sufficed in all cases to remove the odour of the ginger-beer which had previously been stored in these bottles, and it would probably be very difficult to sterilise effectually the wooden tap. In any case the bottle and tap had been in a town where typhoid fever was rife and possibly, nay probably, in a house in which there was a patient suffering from the disease, but this it was impossible to ascertain definitely since the chemist obtained a large number of bottles of distilled water at a time during the epidemic.

The further examination of the water failed to detect the presence of the bacillus coli, though it was soon found that the taurocholate broth contained more than one organism. It is unlikely, therefore, that the water or tap had been contaminated by fæcal matter and how the particular organism ultimately isolated gained access to the water cannot be traced definitely. Two closely related bacteria were ultimately isolated and their characteristics are compared with those of the bacillus typhosus in the appended table. The bacillus A was the more fully examined since it more nearly corresponded with the bacillus typhosus and it will be noted that the only differences ascertained were that bacillus A produced a little more opaque growth on gelatin and on potato and was capable of producing acid in a broth containing saccharose.

—	Bacillus A.	Bacillus B.	Bacillus typhosus.
Growth on Drigalski's medium.	Violet blue colonies.	Violet blue colonies.	Violet blue colonies.
Growth on gelatin.	Like bacillus typhosus but a little more opaque.	Like bacillus typhosus but a little more opaque.	Typical.
Growth on potato.	Not so visible as B; more than typhosus.	Very visible, dirty, creamy.	Almost inviable.
Growth on bile-salt neutral red agar.	White colonies.	White colonies.	White colonies.
Bile-salt glucose broth.	Acid; no gas.	Acid; no gas.	Acid; no gas.
Neutral-red agar, shake culture.	No fluorescence.	Fluorescence.	No fluorescence.
Litmus milk.	Acid slowly formed; no clot or bleaching.	Acid and clot in two days. Bleaching effect.	Acid slowly formed; no clot or bleaching.
Indol in broth.	A doubtful trace.	None.	A doubtful trace.
Lactose broth.	No acid or gas.	No acid or gas.	No acid or gas.
Mannite broth.	Acid only.	—	Acid only.
Dulcite broth.	No acid or gas.	—	No acid or gas.
Saccharose broth.	Acid only.	—	No acid or gas.
Widal's reaction.	1 in 30, marked.	1 in 30, distinct.	1 in 30, distinct.
,,	1 in 50, less marked.	Not so marked.	1 in 100, distinct.
,,	1 in 100, *nil*.	1 in 100, *nil*.	—

The above reactions show that the bacillus A very closely resembled the bacillus typhosus and that it was not nearly allied to the bacillus coli communis, the bacillus enteritidis, or the paratyphoid bacilli. We are inclined to think that to its presence in the distilled water the attack of typhoid fever was due. In any case the coincidence of the presence of such an organism in an article of drink used exclusively by the one member of a family attacked by typhoid fever appears of sufficient interest to be worth recording.

SOME REMARKS ON THE THERAPEUTIC ACTION OF THE IODIDES.[1]

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THE iodides belong to that class of remedies familiarly known as alteratives, that is, drugs which influence nutrition in some undefined way and possess a definite effect upon the bodily metabolism. The iodides are derived from the non-metallic element iodine, and possess in many respects a somewhat similar action. The potassium salt is the one most frequently employed, and it is with special reference to its therapeutics that I wish now to speak. Iodine is a remedy of great antiquity, but its true therapeutic effects were probably not well recognised until after the beginning of the nineteenth century. It was, perhaps, as an antisyphilitic agent and as a remedy against scrofula that we find it most largely employed by those earlier workers. Ricord especially advocated iodide of potassium in syphilis, while Trousseau warned against its being prescribed in exophthalmic goitre. In France a remarkable paper appeared by Delioux in the year 1855 on the treatment of chronic rheumatism and gout by means of iodine. In 1879 Germain highly commended potassium iodide as a remedy in respiratory affections and as an agent which modified very definitely the bronchial secretions. Dieulafoy had already used iodine injections in the treatment of ascites and of purulent pleurisy and we find Trousseau following his method in cases of the latter disease. Balfour early in the "sixties" strongly advocated the use of potassium iodide in the treatment of aortic aneurysm and in this view he was supported by men like Bouillaud who had already in 1859 recorded cases of aneurysm successfully treated in this way. It is probably to Graves, a Dublin physician, that we owe the suggestion of using large doses of iodide of potassium in painful affections of the fasciæ and nerves. Such, then, is a very brief historical retrospect which might well be followed out more fully by any of you who are interested in the history of therapeutics.

I shall now pass in review some of the therapeutic indications which we have established for the use of the iodides, especially the potassium salt. And first, I think, we ought to look at its use in cases of aneurysm. Probably no single known drug acts so beneficially as does potassium iodide in this terrible affection. But what is its *modus operandi*? That is a question by no means easily answered. Balfour[2] maintains that "by the use of potassium iodide we lower the blood pressure sufficiently to enable the natural elasticity of the arterial coats to contract the aneurysmal sac temporarily." He further states that this remedy does not increase the coagulability of the blood but rather produces a greater fluidity. The aneurysm, according to this clinician, is cured not by the formation of solid coagula within the sac but by hypertrophy of the muscular coat where that still exists and of the adventitia, with concomitant contraction. Such, at all events, was the condition of matters found on post-mortem examination in all cases of aneurysm which he treated with iodide of potassium and which showed any measure of success. He also says that "we may accept uniform dilatation of the arterioles as the cause of that lowering of the blood pressure which forms so important an element in the treatment of aneurysm." Now, let us for a moment consider these statements. First, as to the effect of potassium iodide on the coagulability of the blood. For my own part I believe that potassium iodide always tends to render coagulation of the blood more ready of accomplishment and

[1] A paper read before the Therapeutical Society.
[2] Clinical Lectures on Diseases of the Heart. Third edition, p. 438.

that it is to the formation of a firm clot within the aneurysmal sac that the contraction of the latter is due in cases which are benefited by this treatment. In support of this view I would instance the results obtained from the administration of iodides in cases of hæmophilia. The cure here, if cure it can be called, is undoubtedly effected by this very blood-coagulating property of the drug in question. Then, again, when we come to consider the effect of iodide of potassium on the blood pressure we are bound, I think, to admit that Balfour's views are quite untenable but we must look a little more carefully at this interesting question before coming to a decision on the matter.

The administration of iodide of potassium by the mouth has, in my experience, no effect whatever, either upon the pulse-rate or blood pressure within the arteries. It might be otherwise, however, were the remedy given hypodermically. Accordingly, with a view to determining this important matter I made use of iodipin injections in a variety of cases, including aneurysm, arterio-sclerosis, angina pectoris, asthma, and tertiary syphilis. Iodipin is a chemical combination of iodine and sesame oil. I always employed a 25 per cent. strength and found that it possessed the great advantage of being very tardily eliminated from the body after its injection under the skin, whereas iodide of potassium given by the mouth is all eliminated within 24 hours. Being a viscid, oily liquid it should be heated to body temperature before being injected and a serum syringe should always be employed having a capacity of from 10 to 20 cubic centimetres. The injections are best given under the skin of the abdomen, which is first, of course, thoroughly sterilised, and after the injection the puncture should be closed by means of surgical plaster. Another point to attend to in giving the injection is to avoid using massage which only tends to produce irritation and is, moreover, quite an unnecessary procedure. I found that a 15 cubic centimetre injection every second or third day was quite sufficient and very often I found that I could discontinue the iodipin treatment for intervals of a week at a time without detracting from its therapeutic effect. Now the result of this hypodermic method of administering iodides so far as the heart and blood-vessels were concerned was practically negative. In no case was the blood pressure altered, nor was the heart's rate or rhythm affected. Especially I found that the heart's action was never increased or depressed and that the pressure within the radial artery when markedly high to begin with was never lowered, even after a prolonged use of the iodipin injections. Still, all the same, I had good results in nearly all my cases, results which were achieved without that amount of gastric disturbance and loss of appetite which invariably accompany the prolonged oral administration of iodides.

Stockman[3] has already given us his own experience, although his paper refers more especially to the effects produced by potassium and sodium iodide when given by the mouth. He employed doses of 15 to 30 or 40 grains a day in a variety of conditions and found that in no case was any fall in blood pressure recorded or any change produced in the rate or the rhythm of the heart. He therefore concludes that iodide of potassium when given in therapeutic doses by the mouth does not modify the physical condition of the circulation, neither does it directly weaken the heart nor dilate the arterioles. This is exactly in accord with my own findings in the case of iodipin injections, although it is in direct opposition to the teaching of many text-books which maintain that potassium iodide has a definite effect in reducing blood pressure, and it is on this assumption, doubtless, that the majority of practitioners order it to be taken in cases of aneurysms, arterio-sclerosis, and allied affections. This, however, is to my mind erroneous teaching and will not stand the test of careful bedside investigation which, after all, is the best criterion, worth more than volumes of laboratory reports and animal experimentation. But we have not yet settled the question as to how it is that iodides act so beneficially in cases of aneurysmal dilatation. Probably it may be conceived that they do good by eliminating those poisons which have produced the arterial degeneration and by removing from the vessel coats the pathological material deposited upon them in the course of the disease. As a natural result the normal elasticity of the vessel walls is restored and the aneurysmal sac gets a chance to contract. Or, again, it may be considered that iodides cure aneurysm because the latter is a result of syphilitic infection and that by virtue of its antitoxic action on the syphilitic virus iodide of potassium does good. Unfortunately all aneurysms are not of syphilitic origin. I have seen cases where syphilitic infection was out of the question and all of you must be familiar with such examples. The antisyphilitic theory, therefore, is not supported by facts. I am inclined to believe that its sole effect is to aid in the coagulation of blood within the sac and I point to the value of potassium iodide in certain cases of hæmophilia in support of my opinion. Otherwise I am afraid we are still in the dark as to the true therapeutic action of iodides in cases of aortic aneurysm.

If we now look at the effect of iodides on arterio-sclerosis we find ourselves face to face with a similar difficulty. Within recent years Vierordt has asserted that iodides alleviate, and may even actually cure, vascular degeneration. He begins with small doses of two or three grains given two or three times a day and goes up to 15 grains thrice daily. He continues this administration for a period varying from one and a half to three years with occasional intermissions. His results have been uniformly excellent, even in cases, remember, which were non-syphilitic. He gave iodides on the assumption that they promote resolution of the sclerotic process in the blood-vessels. We also find Huchard advocating their employment in similar cases. He says[4] that iodides combine with their influence upon the peripheral and visceral circulation which they accelerate, upon the nutrition of organs which they render more active, and on arterial pressure which they lower, a no less important resolving action on the sclerosed tissue and vessel walls. He found by experiment with the manometer that after intravenous injection of potassium iodide in animals he obtained as much as from 10 to 40 millimetres of a fall in the mercurial column so far as the carotid artery was concerned. These falls in the mercury were produced in from 10 to 30 minutes after the injection of the drug in doses of 50 centigrammes per kilogramme of body weight. These results are quite at variance with those obtained by Boehm and more recently by Prévost, Corin, and Stockman in so far as the sodium salt is concerned. With potassium iodide it is otherwise, for Stockman finds that when it is given intravenously it has a marked depressant action on the heart. Small doses, however, produce a transient rise in blood pressure with slowing of the cardiac action. The depression is doubtless due to the effect of the potassium and not at all to the iodine contained in the salt. This intravenous effect, however, must be put out of account altogether, for we never administer iodide of potassium thus in practice. When we give this drug by the mouth it circulates in the blood in a very much diluted state and so cannot possibly depress the heart as it would do if injected into a vein when it would then reach the heart in concentrated form and so lead to its characteristic potassium effect, as Stockman is careful to point out. I have gone into some detail on those points as I wish to warn you against applying to clinical practice results which have been obtained on animals in a laboratory under artificial conditions and by means which are not employed in the practice of medicine at all. It is a pity that in these days laboratory experiment is so rapidly replacing the older fashioned but, to my mind, much more convincing bedside observation. At all events, I have taken the trouble to satisfy myself that even by the hypodermic injection of iodipin in cases of arterio-sclerosis no effect on the actual blood pressure is to be expected. If it does good in these cases it is, I think, by its power of elimination, thus enabling the blood to get rid of irritating matters and waste products and thus aiding in the readier circulation within the sclerosed vessels. Potassium iodide when given by the mouth is very rapidly absorbed and is probably largely converted into the sodium salt in the body.

In connexion with the problem of the action of iodides in cases of arterio-sclerosis I may perhaps refer to the question of how far the iodides affect the excretion of uric acid. They certainly tend to diminish it. Haig[5] found that if the excretion of uric acid was high it was at once reduced by the administration of iodide of potassium and that when the effect of the drug had passed off the excretion once more rose. He maintains that this lowering of urate excretion is not due to its destruction or elimination in other forms but to its actual retention in the body. The iodide probably renders the blood a bad solvent of urates, and so they are

[3] Brit. Med. Jour., Nov. 23rd, 1901.

[4] Maladies du Cœur et des Vaisseaux, Paris, 1889.

[5] Uric Acid in the Causation of Disease, London, 1904.

retained, but when the effect of the remedy has gone the blood takes up the urates again and accordingly they are excreted by the urine in excess. In his paper on the Effects of the Iodides on Arterial Pressure Haig[6] refers to their specific action in relaxing the arterioles and says that this result, together with the diuresis they produce, is contemporaneous with a diminished excretion of uric acid in the urine. His idea is that arterial pressure is not influenced by the iodides themselves but by their effects on the solubility of the uric acid and the amount of this substance present in the blood, and he bases this opinion on the fact that quite a number of drugs produce a reduction in arterial pressure together with a diminution in uric acid excretion. There is, I think, a good deal to be said in favour of this view of the action of the iodides in cases of arterio-sclerosis, although I think Haig is quite beyond the mark in supposing that the iodides affect the blood pressure. I am inclined, however, on the whole, to favour his uric acid excretion theory, as many cases of arterio-sclerosis, especially those of toxic origin, are benefited when iodides are given on this assumption.

I wish to say a word or two now regarding the employment of iodides in cases of angina pectoris. I am of opinion that to be of any real service the patient should have from 30 to 60 grains per day and that this administration should be kept up for months. A patient under my care some time ago for the disease was given one and a half drachms of iodipin in warm milk three times a day for periods of a month with a week's interval between for a year. During that time he had no attack, although previously he had one on an average every four or five months. Huchard, whose knowledge of heart affections must be considered very extensive indeed, did not hesitate in severe cases to give as much as from 12 to 15 or even 20 grammes of iodide of potassium in a single day. This may be by some regarded as heroic treatment but I think it was fully justified by the results obtained. Arterio-sclerosis, which is so often present in these cases, is not necessarily a source of heightened blood pressure. Rolleston[7] points out that the iodides in such cases act by stimulating the secretion of the thyroid and not by their depressant effect upon the circulation. In this connexion I may refer to a paper by A. Fraenkel[8] in which he says that the pathology of angina pectoris is to be found in a sclerosis of the coronary vessels, the angina occurring in the course of syphilis, gout, and aneurysm being due to this. In other cases a spasm of the smaller vessels of the heart produces an anæmia and the pain thereupon ensues. This spasm, which is probably the source of every attack of true angina, is relieved by the use of iodides, of which the author prefers the sodium preparation as less likely to interfere with digestion. This view of the treatment of angina by means of iodides is, I think, a very rational one and is to some extent in accordance with my own opinion to which I shall presently refer—namely, that iodides relieve angina by their specific antispasmodic action.

Passing now to the consideration of the therapeutic action of the iodides in cases of respiratory disease we find ourselves on less uncertain ground. I may say that it is with this sphere of their action that I am most familiar. In chronic diseases of the respiratory system I know of only two or three remedies which may be absolutely relied on and one of these is the iodide of potassium. Some three years ago, while I was engaged in making a series of observations on pulmonary fibrosis as met with in stone-masons, I found that the two drugs which were of most value were iodide of potassium and ichthyol. With these two remedies alone I was often able to alleviate the symptoms very materially indeed. When the dyspnœa which in such cases generally results from emphysema becomes a marked feature of the case then iodides given regularly over a somewhat prolonged period almost always afforded relief from this distressing symptom. Here it was that I first discovered the superiority of iodipin over iodide of potassium. Its action is more prolonged as its elimination is more gradual than that of the potassium salt. It is also absorbed much less rapidly and so tends to have a more uniform effect upon the tissues with which it is brought into contact. After administrating iodipin for some time traces of iodine may still be found in the urine many weeks after the treatment has been stopped. It is stated that iodipin is practically not split up in the stomach but is absorbed from the intestinal canal. The iodine, however, apparently remains firmly adherent to the fatty acids and probably only a minute quantity is given up owing to the alkaline action of the intestinal juices. The greater portion of the iodipin is oxidised in the body and when this oxidation takes place all the iodine separates out as iodide. This oxidation, however, is slow and compared with iodide of potassium the elimination is, as I have already remarked, more protracted. For these reasons I prefer it in all cases of respiratory disease. The 10 per cent. strength can be given in one or two drachm doses by the mouth, mixed with a little warm milk, three times a day, or the solid form of iodipin may be employed. The latter is a brownish-coloured substance and may be had in rather large, sugar-coated tablets. The solid form gets rid of the objection which some patients have to the oily liquid. Roughly speaking, one drachm of 10 per cent. iodipin is equivalent to eight grains of potassium iodide. But not only do the iodides relieve the dyspnœa in cases of the kind referred to but they have an additional and very valuable therapeutic effect. I find that all these cases of pulmonary fibrosis complain of distressing cough and difficult expectoration most marked in the early morning. In such cases I always obtained the best results by giving a full dose of iodipin at bedtime. By this means the contents of the bronchial tubes are liquefied and expectoration is thereby facilitated. The remedy should, I think, be given on an empty stomach in order to obtain the best results.

In chronic bronchitis, too, especially in elderly patients, the iodides are extremely valuable if given half an hour before meals in a small amount of water, not, as is sometimes advised, a glassful. Here, again, a single large dose of, say, 15 grains given at bedtime acts like a charm. I have heard it stated that it is folly to give so depressing a remedy to old people, but so far as my experience goes nothing but good results follow when it is given in this way. Sometimes it may be given thrice daily in smaller doses, say, five grains, but I do not think the result is then quite so satisfactory or striking. I have known it produce in certain cases, especially when given regularly three times a day, a considerable amount of gastric disturbance. This is probably due to a condition of hyperchlorhydria and I have often been able to alleviate the stomach trouble by combining ammonium carbonate with the iodide. Asthma of true bronchitic origin is, again, a disease in which the iodides are often of great service. They are best given here in fairly large doses, say 10, 15, or even 20 grains every two or three hours for some time. Haig[9] holds that iodides relieve asthma by clearing the blood of its contained uric acid and so reducing the blood pressure and the resulting congestion in the area of the bronchial arteries. My own view is that in this disease the iodides have a real antispasmodic effect, probably by virtue of their action, when given in full doses, upon the nervous mechanism. I have often wondered if this theory might not explain the good results which one so often sees following the administration of potassium iodide in cases of angina pectoris, when given continuously in fairly large doses between the paroxysms. In the treatment of bronchitic asthma, as indeed also of angina, it is well to bear in mind the possibility of securing more lasting effects by substituting iodipin and even in the worst cases by giving the latter hypodermically. I think that in every case of asthma there is always a certain amount, sometimes a considerable amount, of associated spasm of the bronchioles, and when this is relieved, as I maintain it can be, by iodides, then the disease may be said practically to be cured. The probable antispasmodic action of the iodides is one which, at all events, deserves careful clinical investigation in a large number of cases before it is set aside as untenable. In bronchitic asthma, at any rate, the iodides may be confidently relied on to produce good results if properly administered. I mentioned their use in the emphysema associated with pulmonary fibrosis but they are equally beneficial in the emphysema which results from chronic bronchitis.

Turning to the administration of iodides in syphilis, we find them most advantageous in cases where the mucous membranes, bones, and nervous system are involved. I need not dwell long on this field of iodide administration as it is so familiar. I would, however, emphasise the fact that the hypodermic treatment of syphilis in this country

[6] Transactions of the Royal Medical and Chirurgical Society vol. lxxvi.

[7] Clinical Journal, June 21st, 1905.

[8] Deutsche Medicinische Wochenschrift, 1905, Band xxx., S. 571.

[9] Op. cit.

is not very actively carried out. I firmly believe that by early hypodermic mercurial treatment combined with systematic and very thorough inunctions continued over a prolonged period with intermissions we would be able to secure absolute immunity from all the so-called tertiary manifestations of this disease, such as glossitis and vascular changes, together with the numerous spinal and cerebral affections so commonly met with in practice. So, too, in the treatment of tertiary syphilis I am a strong upholder of the hypodermic method of treatment, and here I am fond of using the 25 per cent. strength iodipin. Of course, this means a little extra trouble on the part of the physician, but the results secured will repay the additional time expended on the treatment of these cases. I do not, of course, for a moment suggest that the oral administration of iodides is without effect but I do maintain that it is not so lasting in its results or so quickly successful as when the hypodermic plan of treatment is followed. Large doses ought certainly to be given in syphilitic cases, and especially in nervous lesions, notably locomotor ataxy. In the last-mentioned disease I have given as much as 120 grains of iodide of potassium in 24 hours with very marked benefit. The patient actually put on weight under its administration and lost altogether his troublesome gastric attacks which he complained of specially when he first came under observation. These are the cases in which I think we ought to try iodipin injections, and when opportunity offers I intend to try this method of treatment. Already I have found it succeed admirably in a case of syphilitic cephalalgia attended by twitchings of the left hand which I attributed to pressure of a gumma. The twitchings ceased entirely after the tenth injection, and the headache was distinctly lessened after the third. The effects of iodides on late syphilitic lesions is probably simply due to their eliminating action, but it must not be forgotten that iodides have been, and are still, employed as antitoxic agents. For example, Tarnier employed them in the treatment of puerperal fever and for purposes of disinfection, while Donard used iodide of potassium as a remedy in cases of intermittent fever, and others have used this drug with success in the treatment of erysipelas. It is probable, therefore, that the iodides have a twofold action in cases of tertiary syphilis, first of all, by producing an antitoxic effect, and secondly, by bringing about a more or less rapid resolution of the products of the disease. We must, however, give the iodides in full doses here so as to bring the patient thoroughly under their influence, otherwise they cannot be expected to do much good. By leaving off the administration at intervals and by gradually increasing the dose the patient's tolerance of the drug can usually be guaranteed.

The treatment of chronic rheumatism by means of iodides is a matter of some little interest. For my own part I believe that the iodides do good in these cases by virtue of their effect upon the uric acid excretion. If we give iodides to a patient who is suffering from chronic rheumatism, or from such conditions as sciatica, lumbago, or neuralgia, produced by exposure to cold or wet, and whose urine is acid, then we find that very soon after we have begun our treatment the urine becomes less acid and may even tend to become alkaline in some cases. Haig calls attention to this fall in urine acidity accompanying diminution of uric acid excretion produced by the iodides. He suggests that the retention of uric acid produced by iodides may be the result of some effect upon the phosphates of the blood, although he admits that there are no known chemical data which support his opinion. In cases of chronic rheumatism I prefer to combine the iodide administration with salicylates, the latter acting by eliminating the uric acid while the iodides prevent the uric acid combining with an alkali in the blood. In this respect I am a disciple of Haig, who maintains that it is this combination of uric acid with an alkali or with neutral phosphates in the blood which produces all the physiological and pathological effects which he has been led to attribute to uric acid. (I am here practically quoting Haig's own words.) Small doses of iodide of potassium suffice in cases of chronic rheumatism. Five to ten grains given thrice daily in soda or potash water is a sufficient amount.

I can only refer to the use of iodides in cases of effusion. They act here by elimination and are of very great service. Their beneficial effect is also manifested in all kinds of chronic inflammation. In cases of interstitial nephritis iodide of potassium has been tried with some success. It acts by virtue of its diuretic power and should be given in doses of from ten to 30 grains, or even more, three times a day well diluted. Hepatic cirrhosis is likewise a disease which sometimes improves under iodide treatment. Then, again, in cases of metallic poisoning, notably lead and mercurial poisoning, iodides may be confidently relied on to do good. In chronic metallic poisoning we find the metal accumulating in the body by reason of its affinity for albuminoids. During the constant metabolic changes going on within the body the poison is set free. When we give iodides in such cases we find that the metal breaks away from the albuminoid substances and is eliminated in the form of insoluble salts.

And now, lastly, a word or two as to the employment of the iodides in cases of goitre. Kocher, in a paper which I cannot now lay hold of and which was published a year or two ago, found that when the thyroid gland was normal it took up the iodine when iodides were administered and eliminated it rapidly again. This was not so when the thyroid was diseased. In some cases he found that an abnormal amount of iodine was taken up by the gland and eliminated in excess, while very often in these very cases signs of iodism were observed. He advised that iodides should be given very early in cases of thyroid enlargement and in small doses. Sometimes good results were obtained but, on the other hand, the treatment was often unsuccessful. In cases of exophthalmic goitre iodide of potassium is sometimes employed in the hope of reducing the circulatory force, but Trousseau distinctly warns against its employment in this disease. I think, however, that I have had good results from its adoption in at least one case, although I cannot say that it slowed the pulse or checked the severe palpitation from which the patient suffered. I think if it does good in these cases it must be by its direct action upon the gland itself the function of which has probably become materially affected by the disease process.

Such, then, is a very imperfect survey of some of the therapeutic uses of the iodides. We know comparatively little of the rationale of their action, but at all events I think we are able to formulate certain working hypotheses which are helpful in actual practice. Our lack of knowledge is largely owing to our neglect of clinical experiment and observation. Even the every-day country practitioner may discover new uses for old remedies and fresh reasons for their employment because he is daily working in nature's medical laboratory—the sickroom. The history of the employment of the iodides is largely a history of the progress of medicine, for doubtless we can conceive, for example, of their being first used empirically in the treatment of cough, until one day it was discovered that the cough was associated with emphysema and so they became the favourite in the treatment of this disease. Yes, we may now order the iodides somewhat ignorantly but one day we will by patient effort obtain more light on their therapeutic action in disease.

I think it is a pity that we do not employ the sodium salt more frequently than we do. It is less likely to interfere with digestion and is quite as efficacious as the potassium is. It is well also to bear in mind that the hypodermic administration of the iodides in the form of iodipin is a useful adjunct to treatment, notably in syphilitic disease of the nervous system and in all chronic inflammatory conditions. It possesses the advantages of being more intensive in its action, less upsetting to the stomach, and requiring less frequent administration. Perhaps some of you who have listened so patiently to my remarks may feel that I have added little to your knowledge of the therapeutics of the iodides but I trust that at least I have been able to awaken renewed interest in the subject and have given some of you an impetus to further study which some day will bear fruit in the shape of added knowledge on a subject which at present is beset with untold mysteries.

Edinburgh.

BORIC ACID IN FOOD.—At the Bradford-on-Avon (Wiltshire) petty sessions, held on August 29th, a tradesman was fined £5 and costs for selling milk containing at least 20 grains of boric acid to the pint.—At Camborne (Cornwall), on August 21st, a grocer was summoned for selling adulterated German sausage. Analysis showed that the sausage contained 45 grains of boric acid to the pound. The defendant stated that the German sausage was manufactured in England. After some discussion the magistrates fined defendant 1*s.* and costs, and stated a case for appeal, the chairman remarking that it would be as well to know what quantity of boric acid was permissible.

THREE CASES OF TWISTED PEDICLE.

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THE first case, seen with Dr. A. Warwick Brown, was that of a child barely 15 years of age who had been under his care for some days as one of a group of cases of epidemic roseola when she was seized at night with abdominal pain on the right side, coupled with tenderness and a temperature of 100° F. On the next day the bowels acted normally, the pain subsided, but the temperature rose again to 100° at night. On the following day (June 13th) I saw her with Dr. Brown. We found the tenderness less and no definite lump or swelling in the abdomen; the tongue was furred. There had been occasional retching and an enema given earlier in the day had not been returned. The temperature was 100·6° and the pulse was 90. The case presented the symptoms of a mild attack of appendicitis and as the symptoms appeared to be subsiding we thought it best to wait before deciding on operative interference. On June 14th there was a large dull area in the right iliac fossa. The temperature was 101° and the pulse was 100. An enema given two hours previously to the consultation had been ineffective and the child was obviously a little worse than on the day before. An operation was accordingly decided on and, acquiesced in by the parents, took place the same afternoon. The diagnosis being appendicitis the oblique intramuscular incision was adopted and though some blood-stained fluid was present in the peritoneal cavity the cæcal region was soon seen to be normal. At the lower angle of the wound a thin-walled cystic tumour was discovered and this, examined after prolonging the wound downwards, was found to spring from the left broad ligament. The cyst was tapped and delivered; its pedicle, to which the ovary was attached, was twisted three or four times on itself and the ovary was in a highly engorged and hæmatomatous condition. The pedicle was tied off and the ovary and cyst (a thin-walled unilocular specimen) were removed. The abdomen was sewn up in layers and the patient made an uninterrupted recovery.

The case resembled so closely an attack of appendicitis and the patient was so young that the possibility of ovarian disease was overlooked until actually preparing for the operation, when the ovarian instruments and ligatures were put out as a matter of routine. There was very little extra difficulty on account of the position of the incision as there were no adhesions to be dealt with.

The second case, that of a working girl, aged 21 years, is of interest solely because it forms one of a series of three similar conditions seen in a few weeks. On the night of July 9th the patient had an attack of violent abdominal pain, localised after a time to the lower part and right iliac fossa, with frequent attacks of vomiting. I was sent for early on the 10th; there was then to be made out a fluctuating tender tumour, slightly moveable, and nearly median, extending from the pubes to a little above the umbilicus. Per rectum the uterus could be felt displaced backwards and downwards by the swelling which filled up the pelvis. There was a history of occasional spasms of pain in the lower part of the abdomen for about a week but the girl had kept on with her work until the night before when she had to give in. The temperature was 99·2° F. and the pulse-rate was scarcely at all accelerated. She was removed to the Margate Cottage Hospital, some three miles off, and I operated the same afternoon. The cyst was exposed, tapped, and brought out through the usual median incision. The pedicle was twisted three times on itself, so that the cyst, which sprang from the left broad ligament, was inclined to the right side. As in the previous case, the cyst was unilocular and the ovary, intensely congested and inflamed, was adherent to its base. There was no adhesion of any sort. The pedicle and the abdomen were treated in the usual manner and the patient recovered without any unusual symptoms.

The third case was that of a single woman, aged 48 years. The patient was sent to me by my friend Mr. E. Moon of Broadstairs. She was a more than usually voluble Irishwoman who went to him a week previously to my seeing her and complained of pains in her right hip which she ascribed to rheumatism and refused any suggestion of examination. Four days afterwards she took to her bed and Mr. Moon was sent for. She then had intense abdominal pain, especially in the right iliac region, where a hard swelling could be felt but as she still objected strongly to any sort of examination no real diagnosis was made. The bowels not having acted for several days enemata were given on that and the next day, but without result. On the evening of July 17th the patient was admitted to the Margate Cottage Hospital and then had the following appearances. The whole abdomen was tender and though any attempt at manipulation was intensely painful a hard mass could be felt in the right iliac fossa and a sense of resistance extended from it to well to the left of the middle line. Per rectum the cavity was found compressed by a hard mass occupying the pelvis and the uterus was not made out. The temperature was 101° F., the pulse was 100, and the patient was obviously very ill. Operation was proceeded with almost at once and the mass in the right iliac fossa becoming very definite when the patient was under the anæsthetic it was decided to incise through the sheath of the right rectus so as to come directly on the swelling. There was a considerable amount of blood-stained fluid in the abdomen and the swelling when disclosed was found to lie on the right pelvic brim and to project on the cæcum and appendix, to both of which it was attached by loose adhesions. These were easily separated and the growth was brought out of the abdomen. It was then seen to be a semi-solid ovarian cyst connected with the right broad ligament with a pedicle twisted into a knotted rope-like cord. The pedicle above the twist and the tumour were blackened and congested from the effects of the torsion, and there was a good deal of oozing from the bed it had made for itself. The pedicle having been tied and the tumour cut away the pelvis was examined and a large white walled semi-fluid tumour was found blocking up the whole pelvis. Its connexions were only made out after freely enlarging the incision in both directions. It sprang from the left broad ligament, pushing the uterus against the pubes; it filled out completely the retro-uterine pouch and its wall was adherent to, and continuous with, the peritoneum covering the upper part of the posterior vaginal wall. On the right side there were adhesions to the right broad ligament which was flattened out against the pelvic wall. The tumour was tapped and a large quantity of dermoid contents was let out but it still remained of considerable size and a tedious separation of adhesions followed by some force was necessary before the tumour was eventually brought out of the abdomen. The pedicle, mixed up with firm adhesions on the left side, was unsatisfactorily defined and the removal of the tumour was followed by some smart hæmorrhage. A search of the left broad ligament for its sources followed; these branches of ovarian vessels were discovered and double ligatured, the remains of the Fallopian tube were removed, some more bleeding points were dealt with, and after the insertion of a large rubber and gauze drain the abdominal wall was closed. From the drainage-tube left in for 36 hours some blood-stained serum, possibly a few ounces, was discharged. On the next day the patient's temperature was 100·6° and the pulse was 120, but there was neither vomiting nor distension, and a large enema on the second morning followed by a dose of magnesium sulphate on the third were each effective in relieving the bowels of their eight days' accumulation. The patient's progress after that was uninterrupted and uneventful.

The patient was entirely oblivious of the presence of these tumours, her only previous illness being occasional epileptic fits. The right tumour proved also on examination to be of a teratomatous character, containing, besides the usual semi-solid contents of such tumours, a quantity of iron-grey hair. It was of the size of a large lemon and was unilocular. The larger specimen from the left side was multilocular, each cavity containing hair, teeth, and the usual thick liquid. There were also nipple-like projections from the walls of two of the three chambers into which the cyst was divided by well-marked partitions. When full the cyst was nearly the size of a man's head.

In this case the gradual enlargement of the left cyst had pushed its companion out of the pelvis where in its endeavour to settle down comfortably the torsion of the pedicle had been brought about, giving rise to the already quoted pains in the patient's right hip, which was the first recorded symptom of the presence of the tumours. Bilateral teratomata are described in text-books as "occasionally" occurring, but they certainly form a sufficiently rare variety of the acute abdomen to deserve recording.

I have to thank my colleagues, Dr. R. Thomson and Dr.

J. L. Sawers, for their assistance in dealing with the first and third of these cases, and Mr. B. Moss for assisting me with the second and anæsthetising the third.

Margate.

A PRESUMED CASE OF ACUTE YELLOW ATROPHY OF THE LIVER.

BY W. CURLING HAYWARD, M.B., B.S. DURH., M.R.C.S. ENG., L.R.C.P. LOND.,
DIRECTOR OF THE GOVERNMENT HOSPITAL, PORT SAID.

SOME weeks ago I saw in THE LANCET the report of a case of supposed yellow atrophy of the liver. I have had a very similar case in my practice here and I think that, as these cases are so rare, when one occurs it should be put on record. My case is as follows.

On May 27th I was asked to see a case of jaundice in consultation with another medical man. The patient was a male Arab, aged 40 years, of fine physique and intelligence. He had been ill with jaundice for eight days. His family history was good; his habits were also good; he was a non-drinker and non-smoker. The patient began to feel ill on May 19th, eight days before I saw him. The onset was sudden; there was a slight rigor, with malaise, vomiting, and fever. He took a purge, as is the custom with natives, but this did him no good. Next day he saw that his eyes were yellow, his urine was dark, and that his stools were clay-coloured. He saw a native doctor who gave him a dose of some medicine and a blister for his stomach. The jaundice and vomiting increasing he sent to the hospital. My assistant, Dr. Charawy, went to see the man, and thinking the case was one of simple catarrhal jaundice he gave the patient a saline draught and prescribed a liquid diet. No improvement taking place I was asked to see the sick man. When I arrived at the house I saw him sitting on his bed cross-legged, which position gave him most relief. There was deep jaundice of the conjunctivæ, the skin had a bronzy tinge, and the man looked ill. He complained of some headache, some abdominal pain, and loss of appetite. I took the temperature and found it to be 99·5° F., the pulse was 88, full, regular, and soft, the tongue was furred, and the breath was foul. I then proceeded to make an examination but found nothing. The spleen was not enlarged, the kidneys were normal, no gall-bladder could be felt, and no tumour in any part of the abdomen. The chest was free from disease. On percussing the liver there was some tenderness in the intercostal spaces, but the only painful spot was in the epigastrium, and that was caused probably by the previous treatment. On making a very careful examination of the liver dulness I could not say for certain that there was any decrease of its size and my assistant also could not say for certain. I also treated the case as one of simple catarrhal jaundice. I took away some of the urine to examine, more for experimental purposes than any other reasons. When I had evaporated a drop on a slide and examined it under my microscope, to my great surprise I saw large masses of tyrosin crystals and leucin plates. Then I saw the nature of the case that I had to deal with. Later in the evening I heard that the man was feeling better and his vomiting had stopped. Next morning I was sent for hurriedly. On getting to the house I heard that the patient had become delirious in the night and had tried to throw himself out of window. I then went into the room, the man did not know me; he was lying on his bed apparently asleep. I spoke to him but he refused to take any notice of me, so I tried to turn him towards the light, but he seemed to dislike the light and closed his eyes tightly. He refused to let anyone touch him and refused all food. The friends asked me to take him into the hospital as they could do nothing with him. I did so and in the afternoon I saw the patient in the ward. He again refused to let me examine him and became so violent that I had to put him in a special ward and give him an injection of hyoscine. He became quiet, and after four hours' rest he took some food. I noticed that the jaundice was increasing; there was no vomiting, however, so no medicine was given to him. When the nurse left the room for a minute the man got up off the bed and passed his urine on the floor, although there was a urinal in the corner. During the night the man became very noisy and the resident physician was called and gave him another injection of hyoscine. This acted for some four hours and when dawn came the man became quiet. This quietness was the onset of coma, for as the day passed the patient fell into a light sleep, and when his friends came to see him, though he could be roused, he did not recognise anybody. As the man was now lying on his back I made a very careful percussion of the region of the liver. This gave the following results. Dulness below as far the costal margin, upwards as far as the eighth rib in the nipple line, and in the axillary line as far as the seventh intercostal space. The diminution was very marked. The man's friends refused to let him stay in hospital, so I was compelled to let them take the patient out, although his condition was critical. I heard next day that the man died in coma early that morning. I at once sent my assistant to ask if the friends would allow a small post-mortem examination to be made, but they refused.

From the foregoing short account of this curious case it will be evident that it was not a typical one of simple catarrhal jaundice. My reasons for thinking it was one of acute yellow atrophy of the liver are: the very rapid termination of the case in coma; the rapid diminution of the size of the liver; the early onset of delirium, this coming on after only ten days' illness; and the presence of leucin and tyrosin in the urine, although Osler says this is not an invariable symptom. The symptom of vomiting was not a very marked one and soon yielded to treatment. There was no constipation; the original purge that the man took seems to have kept the bowel moving.

Curiously enough, my colleague here, Dr. E. Cuffey, came to me some few days after my patient had died and told me of a very similar case to mine that he had had in his private work here. So similar was it that I thought he was describing my own case, but as his patient died some days after mine there can be no doubt that there have been two cases of what we suppose to have been acute yellow atrophy of the liver in this town within a few days of each other.

The rarity of these cases must be my excuse for sending you this record.

Government Hospital, Port Said, Egypt.

A PRELIMINARY NOTE ON A NEW SPIROCHÆTA FOUND IN A MOUSE.

BY ANTON BREINL, M.D.,
ASSISTANT LECTURER, LIVERPOOL SCHOOL OF TROPICAL MEDICINE;
AND
ALLAN KINGHORN, M.B. TORONTO,
JOHNSTON COLONIAL FELLOW, UNIVERSITY OF LIVERPOOL.

(From the Runcorn Research Laboratories of the Liverpool School of Tropical Medicine.)

THE spirochæta described below was found in the blood of a white mouse infected with *Trypanosoma dimorphon*, which was sent from Paris by Professor Laveran, and we take this opportunity of expressing to him our sincere thanks for permission to publish these observations.

In the fresh, the spirochæta imparts a movement to the red blood cells similar to that found in the case of other spirochætæ. The parasite is very small, translucent, and actively motile, and shows both a movement of the spiral turns and a progressive movement of the whole organism between the blood cells. It stains readily with any of the aniline dyes and all the modifications of Romanowski and then appears as a short, plump, uniformly-stained spirochæta. Long and short forms occur, measuring between 1·8 and 3·75μ in length and 0·1 and 0·2μ in breadth. The number of spirals varies between two and four and there is also a variation in the size of the spirals in different parasites. Both ends are drawn out to a point, one usually more abruptly than the other.

The parasites were very scanty. In the fresh, only one or two were seen in a preparation, while in the stained one spirochæta in from 20 to 40 fields (Zeiss, oc. 4, $\frac{1}{12}$ oil immersion) was counted. Attempts to transmit the spirochæta to other mice have been unsuccessful so far.

We have been unable to find in the literature any reference

to a spirochæta of mice. Vandyke Carter[1] describes a spirochæta observed in an Indian rat but this is longer and possesses more spiral turns than the one described above. As this appears to be a distinct species, we propose for it the name "*Spirochæta Laverani*" (*n. sp*).

Note.—Since writing the above, a spirochæta of identical appearance with the one described has been found in the blood of a wild mouse, *Mus musculus*. Transmission experiments with this parasite are now in progress.

A CASE OF INTUSSUSCEPTION, ILLUSTRATING THE FALLACIES AND DANGERS OF THE "INFLATION" TREATMENT.

BY J. L. FALCONER, M.B., CH.B. VICT.,
RESIDENT MEDICAL OFFICER, MANCHESTER CHILDREN'S HOSPITAL, PENDLEBURY.

A MALE child, aged ten months, was admitted to the Manchester Children's Hospital, Pendlebury, on the evening of Dec. 1st, 1905, under the care of Mr. E. D. Telford, to whom I am indebted for permission to publish the case. The previous history, furnished by the medical man who attended the case outside, was as follows. On Nov. 15th the child started screaming and bearing down and passed about half an ounce of pure blood. On examination per rectum the finger returned covered with blood. No tumour was felt and nothing was recognised on abdominal examination. Blood-stained mucus was passed on the next day and on the 17th a tumour was felt per rectum. The child was anæsthetised and the bowel was inflated with water from an elevation of two feet. The tumour moved rapidly up the left side of the abdomen and apparently disappeared. The child was rather collapsed after the operation but soon recovered and passed natural stools. Improvement was maintained till the 21st when the child was noticed to be straining and passing mucus. On examination the intussusception was again felt at the anus. The treatment by water inflation was repeated and the intussusception was apparently reduced. The child continued well next day, but on the 23rd the tumour was again felt in the rectum and water inflation was again resorted to. After this the child continued well until the 29th, passing motions with more or less mucus in them. On this day a mass was felt in the left hypochondriac region, although nothing could be felt per rectum, but on the 30th it was again felt per rectum. The abdomen was distended and the child was developing a typical abdominal facies. On Dec. 1st the patient entered Mr. Telford's wards.

On admission the child was found to be very quiet and lethargic, making no resistance to examination. He looked ill, with very sunken eyes surrounded by dark rings, presenting a marked "abdominal facies." The abdomen was slightly distended and tympanitic on percussion but moved fairly well with the respirations. The recti were somewhat resistant but there was no evidence of tenderness on palpation. No mass could be felt through the abdomen, nor was there any vomiting. The child had a normal stool soon after admission. Examination per rectum revealed moveable gut, with the ileo-cæcal valve forming a tight ring at the apex of the intussusception; the whole mass could be freely pushed away by the examining finger. No blood was seen on the finger after withdrawal.

The following operation was performed by Mr. Telford one hour after admission. The abdomen was opened by a three inch incision through the right rectus muscle; a mass was found low down in the pelvis and at first the invaginated gut was withdrawn fairly easily but soon a portion was reached where the intussusceptum had sloughed right through the intussuscipiens and was surrounded by a localised peritoneal abscess. The mass was then rapidly cut away and the divided ends of the bowel were fixed together in the upper angle of the wound; a rubber drainage-tube was inserted down to the collection of pus and the remainder of the incision was closed.

No cause was found for the origin of the intussusception, which was of the ileo-cæcal variety. Considerable shock was present after operation but this was partly recovered from under strychnine, ether, and saline infusions. The child, however, again collapsed somewhat suddenly and died 10 hours later.

Comments by MR. TELFORD.—The case illustrates the very unsatisfactory nature of inflation treatment; such treatment should be discarded for the following reasons:—

1. *Danger of perforation.*—This may occur early when too much fluid is used or later when a plastic peritonitis has ensued. The constricted and sloughing gut may ulcerate into the general peritoneal cavity if operation is delayed. Inflation at this stage materially increases the risk of rupture of the gut.

2. *Uncertainty of the method.*—The case reported shows well how an apparently satisfactory result at the moment may be quite misleading; probably the last inch of the intussusception is never reduced, as this portion always gives difficulty even on laparotomy when the gut is in the surgeon's fingers.

3. It obviously can be of no use in any variety beyond the ileo-cæcal; the ileo-colic and enteric forms cannot be affected by it.

4. It cannot succeed when plastic peritonitis has ensued and therefore can be of use (if at all) only in the very early stages.

The treatment by inflation is to be condemned on the above grounds; also because it wastes most valuable time and seriously imperils the prospect of a subsequent laparotomy with manual reduction which is the only reasonable treatment. It may be stated that when an acute intussusception has existed for 30 hours recovery after any line of treatment whatever is very unusual and therefore the patient in every case should be subjected to rational and scientific surgery without delay.

Pendlebury.

[1] Vandyke Carter: Note on the Occurrence of a Minute Blood Spirillum in an Indian Rat. Scientific Memoirs by Medical Officers of the Army of India, Part iii., 1887, p. 45.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

SUCCESSFUL REMOVAL OF A LARGE HYGROMA IN A CHILD AGED THREE WEEKS.

BY J. CROPPER, M.A., M.D. CANTAB.

IN June, 1905, I was consulted by a Moslem woman about her child, aged three weeks, who had a very large hygroma of the sacral region, of which I inclose a photograph. As

Appearance of child before operation.

the nature of the growth was not certain, and as the skin over it was reddened and threatened to slough, Dr. P.

Wheeler, of the English Hospital in Jerusalem, agreed to admit the child for operation. An exploratory puncture revealed a thick, brownish fluid and hygroma was diagnosed. Having fully explained the risks of leaving the growth as it was and also of operation, the friends made all preparations for the funeral, having before this made up their minds that the child could not survive in any case. After some days in hospital I removed the growth under chloroform by two elliptical incisions, leaving abundant flaps. The contained fluid measured over three pints. The need for speed was quite as great as in pre-chloroform days, for though the loss of blood was not great there was sudden collapse from which, however, the patient rallied. The size of the incision may be judged from the illustration; it extended downwards to the anus. The edges were quickly brought together by sutures, few vessels needing ligature. The lower end of the wound healed by first intention, the upper part oozed for some time, but at no time was there any serious rise of temperature. A minute sinus remained for a while after this. No attempt was made, of course, to remove the hygromatous mass firmly adherent to the sacrum. When seen ten months later the child was doing well so far as the operation went, but was considerably pulled down by fever and had an enlarged spleen. It would, of course, be possible at a later date to produce a more "cosmetic" effect. I have to thank Dr. Wheeler for admitting the child and for his help at the operation.

Ramallah, Jerusalem.

RECOVERY AFTER TAKING OVER 40 GRAINS OF PERCHLORIDE OF MERCURY.

BY PELHAM C. MAITLAND, M.R.C.S. ENG., L.R.C.P. LOND.

IN answer to a hasty summons from a much perturbed husband to come at once to see his wife, who had swallowed some poisonous tabloids, I found she had dissolved five tabloids of hydrargyri perchloridum in a cup of water and drank the whole. This would amount to 43¾ grains, each tabloid containing 8·75 grains. This, from searching inquiries and questionings, I have not the slightest reason to doubt was true. I took away the cup with the drainings and found after testing with iodide of potassium a plentiful precipitate of biniodide of mercury. They were the ordinary tabloids, given by another medical man for injection. I found the woman very ill, quite prostrate, vomiting, with abundant diarrhœa. At once, after finding out the nature of the case, I gave about four ounces of carron oil made with oleum morrhuæ as the only oil available quickly. This I followed with one ounce of vinum ipecacuanhæ. I then dispatched the husband for eggs and milk. These being obtained after a time, the whites and milk were given. As there was such a large quantity of the poison I feared the after effects and gave rather a bad prognosis. I was compelled by engagements to leave the case, but I told the husband what to do, and if necessary, or in certain circumstances, as severe prostration, to call in another medical man, as I could not return that night. On the next morning I found the patient—in spite of some pain and prostration, due partly to the remedies employed—comparatively convalescent. In a day or two, with bismuth and tinctura opii and emollient feeding, she quite recovered.

Shepherd Market, Mayfair, W.

NOTE ON A CASE OF BRADYCARDIA.

BY CHARLES EDMUND MCDADE, M.D. R.U.I., D.P.H.

THE following note on a case of bradycardia unattended with any manifest disease and ending in recovery may prove interesting.

The patient was a man, aged 72 years, who had led a very active life as a public speaker. His health had been good until recently and his family history was also good, with longevity on the maternal side. In July, 1904, he complained of slight giddiness, which yielded to soda, nux vomica, and carminatives. His pulse was then 65 per minute, strong, and regular; his tongue was clean, his appetite was good, and his bowels were regular. The following February he had the same trouble, which soon passed off with the same treatment. On June 2nd I saw him again. His pulse was now 40 per minute, but strong and quite regular. He could speak in public as usual, but any physical exertion required an effort quite unusual to him. In walking he felt that he must stop at times although his breathing was not at all affected. The heart sounds were clear, the blood-vessels seemed healthy, and the urine was normal. He continued his work as usual, walking as little as possible. On June 23rd his pulse was 78 per minute, strong, and regular. On July 7th the pulse had again fallen to 40 and was so on the 14th, when he had to leave home to preside over a large religious congress which involved continuous public work from day to day for three weeks. He performed all this without any great fatigue. I saw him again on August 13th when his pulse was 64, strong, and regular and he felt well except that he did not care for walking. For the following three months he was very fully occupied, speaking in public from six to 12 times each week and travelling all over England. I saw him again on Nov. 13th. His pulse-rate was then 38. He looked tired but still persisted in his work which was all planned beforehand.

From this time until Dec. 15th I saw him each week on his return home; he appeared to be gradually failing, his pulse falling to 32 per minute, but still strong and regular. On this date he had a sharp attack of diarrhœa during which the pulse became intermittent and varied in rate from 32 to 40. From Dec. 19th he stayed in bed, and after a few days' rest his condition was as follows. The radial pulse was regular with a rate of 28 per minute, while the jugular pulsation was 56. At the apex the heart could be heard beating in exact unison with the pulse at the wrist. About one inch nearer the middle line a faint sound could be heard exactly half way in time between each sound at the apex, as if the right ventricle contracted twice as frequently as the left. No intermediate pulmonary second sound could be heard. The breathing was quite normal and there was no cyanosis. The tongue was clean and the bowels were regular. The abdomen was rather tense, giving a tympanitic note as high as the fourth rib on the left side. This flatulent condition disappeared in a fortnight when treated with sulphocarbolate of soda and carminatives.

For the next four weeks he was kept in bed and fed on light nutritious diet. His radial pulse-rate varied from 27 to 32, but was always strong and regular, while the intermediate sounds heard internal to the apex gradually became more perceptible, and the jugular pulsations were, always just twice the radial pulse-rate. On Jan. 25th, 1906, the urine was loaded with urates and gave a slight haze on boiling. On Feb. 1st the radial pule-rate was 32, and the pulmonary second sound could now be heard 64 times a minute, the intermediate sound being weaker than the sound which was synchronous with the apex beat. The left ventricle was beating 32 times a minute. On the 4th the intermediate sounds were more pronounced. On the 5th the radial pulse was 63 per minute, strong, and regular. For the next four weeks it varied from 48 to 80, only reverting to the condition of bradycardia on one occasion after a sharp attack of diarrhœa.

During February there were several attacks of diarrhœa which were accompanied with a suppression of one beat in seven at the wrist. On two occasions there were two beats missed at the wrist in succession and the patient's head gave a momentary nod each time it did so. A few days after the pulse-rate was restored he complained of a continuous pain on the left side of his head; this eased off when the pulse-rate fell below 65 but was very bad when the pulse-rate was over 75. When the pain was severe the anterior branch of the left temporal artery felt hard like whipcord, the right side being quite normal. This pain persisted more or less for about a fortnight. The urine was still full of urates and gave a haze on boiling. He was now able to get up each day, his strength returning very slowly. From March 1st the pulse ceased to be intermittent. On March 30th he was sufficiently recovered to leave home for the seaside and resumed his public work on April 23rd. On April 29th his pulse was 72, every beat strong and regular, and he felt fairly well. Sir William Broadbent saw him with me on Dec. 28th, 1905, and March 21st, 1906.

Lavender Hill, S.W.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv., Proœmium.

CLAYTON HOSPITAL, WAKEFIELD.

A CASE OF PUERPERAL FEVER SUCCESSFULLY TREATED WITH ANTISTREPTOCOCCIC SERUM.

(Under the care of Mr. WILLIAM STANGER.)

FOR the notes of this case we are indebted to Dr. C. Dyson Holdsworth, house surgeon to the hospital.

The patient, who was aged 23 years and had already given birth to one child, was delivered of a male child on Oct. 19th, 1905. The midwife in attendance was unable to deliver the placenta. After the lapse of nearly two hours, during which time there had been considerable hæmorrhage, Mr. L. T. Wells was called in. He had to strip off the placenta manually but it came away whole. The first week of the puerperium was normal but on the night of the 26th the patient's temperature ran up to 105° F. and the lochia became foul. Vaginal douches containing perchloride of mercury were given, cold sponging was practised, and quinine was administered in an effervescing mixture. On the next night the patient's temperature again rose to 105°, but after this there was a slight improvement which, however, proved to be only temporary, so she was removed to the Clayton Hospital on Nov. 6th. As her temperature remained irregular and the discharge began to increase the uterus was explored under an anæsthetic on the 8th and some fragments of membrane were removed with a blunt curette. Intra-uterine douches were given daily for the next week, the discharge decreasing rapidly. On the 9th a pyæmic abscess was opened in the left deltoid region and numerous streptococci were found on microscopical examination of the pus. That evening 20 cubic centimetres of antistreptococcic serum were injected into the abdominal muscles. At midnight the temperature had risen to 105° and the pulse-rate to 150, so ten more cubic centimetres of serum were given. On the following morning the temperature had fallen to 100° but about 7 P.M. the patient had a rigor and her temperature ran up to 105·6°, with a pulse-rate of 138; ten cubic centimetres of serum were administered and as her condition was apparently becoming worse 20 more cubic centimetres were injected and liquor strychninæ hydrochloridi was given every four hours in five-minim doses hypodermically. During the next two days 30 cubic centimetres of serum were given per diem but the patient seemed to be sinking. Several pyæmic abscesses were opened—namely, one in the lumbar region posteriorly, another in the right arm, and another in one of the fingers of the left hand. She then rallied slightly and on the 15th her temperature was down to 99°, so the serum, which had been used in 20 cubic centimetre doses for the last three days, was discontinued. The improvement lasted until the night of the 20th, when the temperature rose to 103° and the serum treatment was accordingly resumed, 20 cubic centimetres being given per diem. On the 23rd the temperature rose to 104·4° and the pulse-rate to 144, so the serum was increased to 30 cubic centimetres per 24 hours for the next three days.

On the 25th a large amount of pus was evacuated from the back. The patient seemed to be becoming feebler and her pulse weaker, so digitalis was administered instead of strychnine for a few days with apparent benefit. On the 26th, as the temperature was lower and the patient seemed a little better, the serum was discontinued; on Dec. 3rd, however, the temperature rose to 103°, so ten cubic centimetres of serum were given on this and the succeeding day, after which no more serum was used. For the next three weeks the patient's temperature remained irregular and several new abscesses had to be opened. The temperature then became steadier, the abscesses gradually dried up, and with the help of tonics the patient made a very good recovery. For a time there was some stiffness of the joints but this was gradually overcome by massage and the patient was able to leave hospital on March 31st. Owing to the difficulty in obtaining supplies three brands of serum were used, the respective makers being Parke, Davis and Co., Burroughs, Wellcome and Co., and the Lister Institute. The temperature and general condition always seemed to respond to the serum and no unpleasant effects were manifested at the sites of injection. During the greater part of the febrile portion of the illness small doses of quinine were given in an effervescing mixture.

BUDLEIGH-SALTERTON COTTAGE HOSPITAL.

A CASE OF RUPTURED PYOSALPINX COMPLICATED BY A LARGE OVARIAN CYST.

(Under the care of Mr. THOMAS G. C. EVANS and Mr. RUSSELL COOMBE.)

THE patient was 39 years of age and had been married for ten years but had never been pregnant. Eight weeks after marriage she had an attack of pelvic pain which kept her in bed for six weeks. During the last few years she had had frequent attacks of abdominal pain which had kept her in bed for a few days at a time. One of these lasted from Feb. 13th to 16th, 1905, and about midnight between Feb. 16th and 17th she had an attack of very acute pelvic pain with vomiting and repeated shivering fits. She was seen by Mr. Evans on the morning of the 17th. Her pulse-rate was then from 150 to 160 and her temperature was 105° F. Her abdomen was distended and very tender just above the pubes. She was removed to the hospital.

Mr. Russell Coombe saw her with Mr. Evans at 3 P.M. Her abdomen was distended and moving fairly freely; both flanks were resonant; the central part of the abdomen from the pubes to above the umbilicus was dull; there was exquisite tenderness on the left side above the middle of Poupart's ligament; the pulse-rate was 160 and the temperature was 103°. Chloroform having been administered by Dr. A. Walker, and Mr. Evans assisting, Mr. Coombe made an incision through the left rectus when a large ovarian cyst, not congested, presented. The excision was extended and this was delivered. It was found to be incorporated with the right side of the womb and the right tube, splitting the broad ligament and lifting the peritoneum up to the pubes anteriorly and up to the cæcum on the right side, so that the bladder showed in a groove on its left side below and the appendix in a groove on its right side above. All attempts to clear it from its connexion with the peritoneum and broad ligament failed and it was therefore drawn over against the right side of the abdominal wound. The pelvis was then explored and the left tube was found to be much enlarged and surrounded by pus which was escaping from a hole in the tube; the pus was sponged up, the tube was emptied, and the tear was clamped. The tube was then dissected off three or four inches of bowel to which it was adherent, the raw surface was covered, and the tube was ligatured off close to the uterus and removed. The remainder of the ovarian cyst was narrowed by a purse-string suture and cut off flush with the abdominal wound, its cavity was packed with gauze, and it was fastened in the lower end of the wound. A large drainage-tube with a gauze wick was then passed down to the stump of the left tube and the abdominal wound was closed with silkworm-gut sutures. The patient made an uninterrupted recovery and is now (August, 1906) in excellent health.

THE WINSLEY SANATORIUM.—The trustees of the Winsley Sanatorium have convened a meeting to consider the financial position of the institution and a proposition which has been made to enable them to raise £7500 on mortgage.

INTERNATIONAL CONFERENCE ON TUBERCULOSIS.—The International Central Bureau for the Prevention of Consumption is meeting at the Hague this week, the deliberations commencing on Sept. 5th. The National Association of England is represented by Dr. C. Theodore Williams and Dr. Nathan Raw.

Reviews and Notices of Books.

Arbeiten aus dem königlichen Institut für Experimentelle Therapie zu Frankfurt-a-M. Herausgegeben von Geheim Medecin Rath Professor Dr. P. EHRLICH. Heft I., mit 6 Tafeln. Jena: Gustav Fischer. 1906. Pp. 102. Price 9*s*.

Professor Ehrlich has reprinted and expanded several papers on cancer in mice which have been published by himself and Dr. H. Apolant since July of last year. To these papers he has contributed a preface in which he summarises the general scope of his investigations. Sticker's observations in dogs on what Erhlich maintains is a lympho-sarcoma are referred to, as are also those of Sticker and Marx on molluscum contagiosum, both having been made in Erhlich's Institute. The inclusions in cancer cells, such as those so carefully investigated by Plimmer and bearing his name, have been carefully studied and they are stated to be non-parasitic in nature. Ehrlich asserts that no success has yet attended the attempts to solve the problem of cancer by purely histological or purely experimental methods, nor has the study of the processes of division in cancer cells had any useful result. All practical medical men will be in agreement with Ehrlich if his view is that until cancer can be *produced de novo* experimentally we are reduced to studying the behaviour (growth) of fully developed cancer. He lays weight on the fact that he has been able to study 250 tumours in mice and believes that this large number enables him to draw conclusions more certainly than Bashford could do "from a much smaller number of cases."

So much for the preface, the volume itself consists of three parts. In the first part Dr. Apolant discusses the histological features of the mammary tumours of the mouse and the general results of attempting to transplant them; in the second, Ehrlich describes a transplantable chondroma; and in the third he summarises his experimental studies and puts forward some suggestive speculations. Dr. Apolant examined 221 mouse tumours, which he correctly regards as epithelial tumours of the mamma; metastases were present in only six. The tumours he classifies in sub-groups according to their histological characters, represented at one end of the scale by simple adenoma and at the other end by alveolar carcinoma. The histology of the different groups is illustrated on three plates. According to the author, the adenomata are frequently transformed into carcinomata and the process of transformation can be distinctly followed, proceeding either diffusely or in circumscribed areas. An increased energy of growth on the part of the mammary tissue itself may result in the direct development of carcinoma without an intermediate adenomatous stage.

The transplantation of the tumours has been attempted in the following manner, and it is characteristic of the advantageous conditions under which medical research is pursued in Germany that Ehrlich was able to delegate the routine work of many thousand inoculations to skilful laboratory servants. The tumour has been broken down in a mortar to the consistence of an emulsion and a small quantity of this injected subcutaneously. Two days after, the mass is for the most part necrotic and inclosed within a thin zone of proliferating cells. The author gives scant notice to the respective parts played by parenchyma and stroma, possibly because of the difficulty of doing so in broken-down tumour tissue. He contents himself with stating that the tumours develop from isolated groups of cancer cells. It is unfortunate that the part of the stroma is not alluded to, for the author describes the development of growths with the histology of a spindle-celled sarcoma in the course of the continued propagation of two of the carcinomata. Apolant found macroscopic metastases in the lungs in the course of the propagation of only one sporadic tumour, and this is explained by Ehrlich as due to the rate and amount of the growth at the site of inoculation starving, as it were, any cells which might have given rise to metastases. Apolant emphasises the absence of infiltrative growth both in the primary and in the transplanted tumours, and in doing so seems to us rather to ignore the demonstration given last year in the reports of the Cancer Research Fund that "expansive" and "infiltrative" growths are dependent on the varying resistance of the tissues to the growth of experimental tumours.

In the third paper Ehrlich reviews the results of his experiments from the standpoint of the "side-chain" theory of immunity, or more concretely from the standpoint of the mechanism of assimilation which the theory postulates as an explanation of the taking up of foodstuffs by cells. The difficulty attending the primary inoculation of spontaneous tumours of the mouse is referred to (Ehrlich only succeeded in transplanting 14 tumours out of 94) and is compared to the varying suitability of animals for grafting of normal tissues, especially embryonic. He concludes that normal animals must possess powers which prevent the continued growth of the tumour cells. In consequence the spontaneous development of cancer is supposed to depend on two factors: (1) the primary cancerous cell transformation and (2) the growth of this small cancerous area into a tumour. As is now generally recognised, the two factors are quite independent, and Ehrlich contrasts them as presenting an analogy with (1) the introduction of the tubercle bacillus and (2) the development of progressive tuberculous lesions. The possibility of varying virulence of the cancer cells playing an important rôle, just as in the case of tubercle, is treated as of subsidiary importance, and all carcinomata are apparently regarded as potentially equally virulent, although the divergent results of the primary transplantations recorded in the papers seem directly to negative such a conclusion. Ehrlich strongly holds that it is possible to increase artificially the power of growth of the cells by selective transplantation and in this way to overcome the individual resistance. The frequency of spontaneous cancer is believed to be determined by the absence of this natural power of resistance.

The results of transplanting mouse tumours, especially the sarcomata already referred to, in rats are described in this section at some length. A temporary proliferation is obtained in the rat; after a week the tumour ceases growing and is ultimately absorbed. This result is made the basis of a fundamental speculation on the bio-chemical conditions under which the growth of tumour cells proceeds. In addition to the ordinary foodstuffs necessary for growth, and which are supplied equally by the rat and by the mouse, Ehrlich postulates a special substance "x" necessary for continued growth and found only in the mouse. The amount of this substance "x" transplanted along with the tumour cells suffices to enable the cells to grow for a time in the rat, and when this amount is exhausted growth ceases. The immunity of the rat to a mouse tumour is hence not due to inimical substances in the rat's body but to the absence of the substance "x" necessary for growth; the immunity is due to "atrepsie" (from τρεφω—nourish). In a similar manner Ehrlich accounts for the small size of the lung metastases he has observed in mice with transplanted cancer, and ignores, or is unaware of, the large size of the metastases which other investigators have observed. The primary tumour requires so much of the special foodstuffs ("x," &c.), according to Ehrlich, that the metastasis is starved. Pursuing this line of reasoning, the conclusion is arrived at that the absence or the small size of metastases is evidence of a special kind of malignancy, characterised by an abnormally high power of proliferation. The relative

energy with which nourishment is taken up by the tumour cells and the body cells respectively is made the subject of an interesting speculation. Briefly, Ehrlich, it seems to us, assumes that a tumour which does not grow on transplantation fails so to do because the avidity of the cells of normal animals for nourishment is greater than that of the tumour cells in question. *A fortiori* the tissue cells of the animal spontaneously suffering from such a tumour must have had an avidity much below normal and this constitutional dyscrasia determined the growth of the tumour in that animal; in other words, was the cause of cancer. It is suggested that such a diminishing power of absorbing nourishment on the part of the tissues generally as age advances may account for the age-incidence of cancer.

The papers are a valuable contribution to the experimental study of cancer. Many of the facts are identical with those on the growth of cancer under experimental conditions with which the work of the Cancer Research Fund has made us familiar in this country during the past three years. The results of the German and English investigations, where they cover the same ground, are for the most part confirmatory of one another, and where they do not overlap they are complementary of one another. The speculations in which the distinguished German investigator indulges are characteristic examples of Ehrlich's scientific use of the imagination. Speculation on the nature of cancer knows no limits, and in this connexion we may add that Professor Ehrlich is not always urbane in his allusions to the work, some of which is necessarily speculative, of other observers.

Gynæcological Diagnosis. By ARTHUR E. GILES, M.D., B.Sc. Lond., F.R.C.S. Edin., M.R.C.P. Lond. With 35 original illustrations. London: Baillière, Tindall, and Cox. 1906. Pp. 212. Price 7*s.* 6*d.* net.

Dr. Giles truly points out in his introductory chapter that there are many difficulties in the way of the student who is anxious to obtain some practical knowledge of gynæcological diagnosis. Only too often his opportunities of making pelvic examinations during his student career are of the scantiest, and unless he holds some resident post he may well commence practice without being able to say with certainty what the exact condition of the pelvic organs in any given case may be. A book such as this will prove of considerable assistance to the student in helping him to make the most of his scanty opportunities, and will also be of assistance to those who are engaged in teaching students this branch of medicine. It is written purely from the clinical point of view and on the plan of arriving at a diagnosis from the presence of certain symptoms or physical signs. The various symptoms are discussed in turn and the different conditions which may be associated with them are pointed out. At the end of most of the chapters synoptical tables are given, showing in a clear form what pathological states are met with in association with certain groups of symptoms and physical signs. In this way practically the whole field of gynæcological diagnosis is covered.

Dr. Giles has carried out his purpose fairly well. We are surprised, however, to find no mention of what may be termed ordinary ovarian pain either in the text or in the index. Apparently the author holds that all cases of such pain are due to a condition of so-called cöphoritis. This we cannot agree with and we are not aware of any proof of such a view. Cervix-adenoma is a term which we think might well be given up. An erosion is in no sense of the word a true adenoma, and the use of this term only leads the student to imagine that it is some form of new growth resembling the common adenoma of the breast with which he is probably best acquainted. To call an erosion of the cervix uteri an adenoma seems to us a misuse of a term which has always had a well-recognised meaning. On p. 126 we are told in the diagnosis of the causes of hæmorrhage from the body of the uterus that we may feel a mass with the consistency of adenomata. We do not quite know what the author means, but are sure that statements of the kind are out of place in a book for students. Indeed, throughout a book which displays much industry and knowledge the author is not sufficiently careful to weigh his words exactly. One of the most difficult abdominal tumours to diagnose correctly is an encysted collection of fluid due to tuberculous disease of the peritoneum. We are afraid that but little assistance would be obtained by anyone referring to Dr. Giles's book for help in the recognition of the condition. Again, it is not very accurate to say that the hymen is deficient in pregnancy, when what is meant is that the hymen is torn or stretched. It would be difficult for anyone to make a correct diagnosis of hydramnios on the very insufficient data which are given. A large abdomen occupied by a smooth tense tumour in which fœtal parts can be made out appearing to correspond to one fœtus only, and in which only one fœtal heart can be heard, does not seem to us either a correct or an adequate description of a condition which is not uncommon and which often leads to difficulties in diagnosis.

One of the chief difficulties in writing a book purporting to supply a synoptical scheme of diagnosis is to insure that all the symptoms of any given disease shall receive a place. Thus in the present instance there is no mention of the abdominal pain so constantly present; nothing is said of chills or fever, or of the pain on micturition commonly met with in these cases. Dr. Giles may have been afraid of seeming to repeat himself, but in a book for students such repetition is often a virtue.

We have frankly pointed out what we consider the defects and omissions in a book with many good qualities, but no doubt in a future edition the author will amplify and improve his work, when it should be found a very useful one. The illustrations are clear and useful.

Acute Contagious Diseases. By WILLIAM M. WELCH, M.D., and JAY F. SCHAMBERG, A.B., M.D. Illustrated with 109 engravings and 61 full-page plates. London: Henry Kimpton. 1905. Pp. 781. Price 25*s.*

THE authors in their preface explain that the diseases dealt with are those of which they have had special experience in the municipal hospital at Philadelphia and that they have dealt with those especially characterised by transmissibility and by contagion rather than the group of "infectious diseases" as a whole which would have necessitated the inclusion of maladies upon which they do not feel specially qualified to write. The text is based upon, among other things, a personal study of over 9000 cases of small-pox, 9000 cases of scarlet fever, and 10,000 cases of diphtheria, which no doubt accounts for the fact that the authors are eminently practical in their descriptions of the diseases of which they write. One of the most noteworthy features of the book is the excellence of the illustrations which are almost without exception good reproductions of photographs of actual cases. The various rashes are represented by typical examples and in some cases serial photographs of the course of the rash are given. Specially worthy of mention is the series of eight full-page plates showing the course of the rash in small-pox in an unvaccinated man, from the appearance of the papules to the stage of scarring. Many of the other rashes are also shown as well as possible without coloured plates.

The book begins with an exhaustive study of vaccinia, which though not strictly a contagious disease within the definition of the authors, is included because of its relation to variola. The history of vaccination is given in considerable detail; the technique of the process, the course

of the disease, its complications and sequelæ are carefully described, and a section is devoted to statistical evidence of the value of vaccination which is well worth study. An interesting chapter deals with the variolous diseases of lower animals and contains a good deal of information with reference to the literature of this comparatively neglected study. Chapters IV. and V., comprising together 172 pages, are devoted to variola and constitute a thoroughly comprehensive study of that disease copiously illustrated from the authors' own extensive experience. The account of the diagnosis and treatment is thoroughly practical and useful. The Cytorextes variolæ is carefully described and references are given to the literature of the subject. Chicken-pox is next dealt with and the symptoms, diagnosis, and complications are carefully given. The account as a whole is perhaps a little less exhaustive than that given of variola. Scarlet fever is next discussed and the account given is of equal merit with those preceding it. The illustrations of the process of desquamation are particularly good and should be useful to the student or practitioner using the book as a a work of reference. The account given of scarlatinal rheumatism is shorter and less complete than we should have looked for in a work of this magnitude. In the section devoted to measles some coloured figures are given, reproduced from Koplik, of the spots which are usually referred to by his name. This chapter is nearly as lavishly illustrated by reproductions from photographs as that on variola. Rubella is next considered and its various forms are described and illustrated.

Typhus fever and diphtheria complete the list of diseases comprised in the contents of the volume. The article on typhus fever contains far fewer references and is shorter than most of the others, but the general features of the disease and its complications are adequately described. The diagnosis of this disease, now fortunately so comparatively uncommon in most parts of this country, is carefully considered. The account given of diphtheria includes the bacteriology of the disease, its various forms, and their recognition and prognosis. The serum treatment is dealt with in a chapter to itself where statistics of its effects are given. The authors give as their experience that cases treated by medium-sized doses recover as well as those receiving very large doses, after the manner recommended by McCollom of the Boston City Hospital. The various antitoxin rashes are described and figured. The book concludes with a short chapter on disinfection, which might with advantage have been extended so as to include some general remarks on quarantine, for quarantine is only referred to in the chapters on scarlet fever and variola.

JOURNALS AND MAGAZINES.

The Journal of Physiology. Edited by Sir MICHAEL FOSTER, K.C.B., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXXIV., Nos. 4 and 5. Cambridge University Press: C. F. Clay. August 10th, 1906. Price 8s.—The articles contained in this number of the journal are: 1. The Regeneration of Post ganglionic Vaso-constrictor Nerves, Part I., by Basil Kilvington and W. A. Osborne, with nine figures in the text. Starting from the observation of Langley and Anderson that when the central end of a divided limb nerve has an opportunity of joining with two peripheral nerves stimulation of one peripheral nerve, after complete severance of the conjoined nerves from the central nervous system, may cause contraction of the muscles innervated by the other, the author draw the conclusion from their experiments that when the central end of any nerve distributed to a limb is sutured to the ends of two peripheral nerves, vaso-constrictor fibres can be detected after a time in both peripheral nerves, but no axon bifurcation of vaso-constrictor fibres takes place. 2. The Post-mortem Flow of Lymph, by F. A. Bainbridge. The experiments were made on dogs and the flow of lymph from the thoracic duct was usually observed to continue for about an hour after death and was most abundant during the first 20 minutes. It is chiefly derived from the liver capillaries, from whence it is squeezed into the thoracic duct by intestinal movements taking place after death. 3. The Influence of Organ Extracts of Cold-blooded Animals on the Blood Pressure of Dogs, by Orville Harry Brown, M.D., and Don R. Joseph, M.S., with eight figures in the text. The animals experimented on were dogs and the extracts used were those of the liver, kidney, and sex glands of sharks, squeteague, and dog-fish. These contain both pressor and depressor substances, the effects being due to vaso-motor changes. 4. Further Observations upon the Functions of the Thyroid and Parathyroid Glands, by Swale Vincent, Professor of Physiology in the University of Manitoba, Winnipeg, and W. A. Jolly, assistant to the professor of physiology in the University of Edinburgh. In these further observations the authors state that their experiments show that neither thyroids nor parathyroids can be considered organs absolutely essential to life. Many animals suffer but little from their removal. They think that the pathology of myxœdema must be more complex than simple thyroid insufficiency. 5. The Estimation of the Oxygen Dissolved in Salt Solutions, by Joseph Barcroft and Philip Hamill, with three figures in the text. The figures represent the apparatus employed. 6. Experiments in Examination of the "Locked Jaw" Induced by Tetanus Toxin, by Herbert E. Roaf, M.D. Toronto, and C. S. Sherrington, with four figures in the text. Three of the higher types of apes were the subjects of experiment—Cercopithecus, Cynocephalus, and Simia. The changes in the reactions observed seemed to the authors explicable by changes in the condition of lower centres upon which the "motor" cortex acts. 7. Cortex and Medulla in the Suprarenal Glands, by T. R. Elliott (G. H. Lewes student), and Ivor Tuckett. The relative masses of these parts were compared and the effects of the removal of the glands observed. In the guinea-pig removal of both glands causes death in a few hours and the removal of one gland, notwithstanding the exercise of great care, proved fatal within 24 hours. A description is given of the histology of the glands not only in the guinea-pig but in the Monotremata. The effects of suprarenal grafts in the guinea-pig are discussed. 8. Further Observations on the Time Relations in the Action of Trypsin, by S. G. Hedin. 9. On the Optimal Electric Stimuli of Normal and Curarised Muscle, by Keith Lucas, Fellow of Trinity College, Cambridge, with six figures in the text. The Proceedings of the Physiological Society on June 2nd, 1906, are also given.

The Quarterly Journal of Microscopical Science. Edited by E. RAY LANKESTER, F.R.S., ADAM SEDGWICK, F.R.S., and SYDNEY HICKSON, F.R.S. With lithographic plates and text figures. London: J. & A. Churchill. August, 1906. New Series, No. 199 (Vol. L., Part 3). Price 10s.—The contents of this number are: 1. On the Development of Nebalia, by Margaret Robinson, Zoological Research Laboratory, University College, London. The Nebalidæ form one of the lower subclasses of the crustacea, the body presenting 21 segments, of which the foremost are inclosed in a bivalve shell. Miss Robinson obtained her specimens from Naples, Jersey, and Roscoff. The nearest allies amongst the Entomostraca are, she thinks, the Phyllopoda and she regards it as probable that Nebalia is the most ancient crustacean at present known. Miss Robinson gives the earlier stages of the development and illustrates her description with six plates. 2. On the Early Stages in the Development of Flustrella Hispida (Fabricius) and on the Existence of a Yelk Nucleus in the Egg of this Form, by R. M. Pace (*née* Clark), late scholar of Girton College, with four plates.

The material on which the article is based was obtained from the south coast and Isle of Wight where it is found growing abundantly between tide marks on fucus and other algæ, the colonies forming dark, mossy-looking patches incrusting the algal fronds. The Flustrella is a Bryozoan and the reproductive process can be followed from February to August. A yelk nucleus of the type seen in Pholcus is present in the developing egg. Segmentation and cell lineage have been followed out in detail and are illustrated in four plates up to the 32-cell stage. The formation of the endoderm has been traced. The oral and aboral ectoderm are shown to be differentiated as early as the 16-cell stage. The ciliated ring of the larva is formed by the coalescence of several distinct rows of cells and the animal is provided with a stomach. 3. Researches on the Origin and Development of the Epiblastic Trabeculæ and the Pial Sheath of the Optic Nerve of the Frog, with Illustrations of Variations met with in other Vertebrates and some Observations on the Lymphatics of the Optic Nerve, by J. T. Gradon, M.A., St. John's College, Oxford, with two plates. Mr. Gradon finds that the cells of the optic stalk perform the following three functions. They conduct the nerve fibres, which in their turn resolve the constitution of the cells of the stalk so that they, in the second place, provide the nerve fibres with a supporting framework which, thirdly, provides the whole interior of the optic nerve with an elaborate system of minute lymph channels. 4. Piroplasma Muris, Fant., from the Blood of the White Rat, with Remarks on the Genus Piroplasma, by H. B. Fantham, B.Sc. Lond., Derby Research Scholar, University College, London, with a plate. The parasite was found to be widely distributed through the body of the rats examined, it is intra-corpuscular in habit, occurring in the red corpuscles of the host and belongs to the order Hæmosporidia of the class Sporozoa. They resemble a pear in form and are from 0·5 μ to 1·5 μ in diameter and from 2 μ to 3 μ in length, with usually one chromatin body. They multiply by simple fission.

LIBRARY TABLE.

Anæsthesia in Dental Surgery. By THOMAS D. LUKE, M.B. R.U.I., F.R.C.S. Edin. Second edition. With 29 illustrations. London: Rebman, Limited. Pp. 227. Price 6*s.*—Dr. Luke has much increased the usefulness of his little book by the additional detail into which he has entered with regard to local anæsthesia for dental extractions. Indeed, we regard the chapter upon this subject as the best and most important in the book, for we are not acquainted with any work on general anæsthetics in which the matter of local anæsthesia in dental work is fully dealt with. Dr. Luke has added an appendix dealing largely with chloroform in dental surgery. Here, while we are in entire agreement with the general principles enunciated, we find some statements as to the action of chloroform which we do not confirm and which are not in accordance with generally accepted doctrine. Dr. Luke appears to us to lay too much stress upon the liability to reflex vagus inhibition in light chloroform anæsthesia and too little upon the importance of dosage. Also one of his explanations of chloroform death as due to "direct retardation and arrest of the pulmonary circulation, first in the capillaries and later in the larger vessels, due to direct local action of chloroform," is a statement for proof of which we should be glad to have reference. Dr. Luke enters upon the question of the administration of anæsthetics by those holding a dental but no medical diploma and draws attention to the looseness of all legal statement in the matter. We think that he might have spoken with even more marked emphasis upon the undesirability of the administrations being conducted by any but a properly qualified medical man and upon the advantages of more medical students making themselves really proficient in dental anæsthetics before going into practice. Dr. Luke's book is clearly written and well produced and we congratulate him upon the need for a second edition.

Lehrbuch und Atlas der Zahnärztlichen Technik. Von Dr. Med. und Phil. GUSTAV PREISWERK. With 330 illustrations. Munich: J. F. Lehmann's Verlag. 1906. Pp. 442. Price 14 marks.—This volume should prove of value to those who are more particularly interested in the mechanical side of dental practice. It is hardly within the scope of this notice to enter into a detailed criticism of the various methods advocated; suffice to say that the different ways of replacing teeth by means of crowns, bridge work, and ordinary plate-work are fully described and illustrated in a thoroughly up-to-date manner. The final pages of the book are devoted to the methods of making obturators and to regulating appliances. The volume forms one of Messrs. Lehmann's well-known series and should help in sustaining the reputation which that series has already obtained.

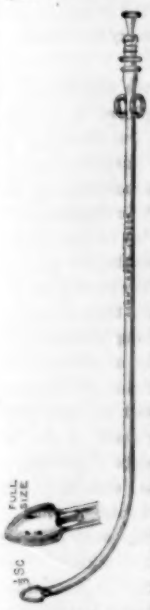
Methods of Organic Analysis. By HENRY C. SHERMAN, Ph.D., Adjunct Professor of Analytical Chemistry in Columbia University. New York and London: Macmillan and Co., Limited. 1905. Pp. 245. Price 7*s.* 6*d.*—In the words of the preface "no attempt is made to touch upon all important branches of this subject." The principles of organic analysis as applied to food and drink materials are, however, adequately set forth and the particular topics chosen as examples are well calculated to give the careful reader a very good groundwork of organic methods and to put clearly before him the meaning of the results. Apart from this, the author has exercised an excellent discretion in his selection of references to the works on the subject by acknowledged authorities not only in America but in this and other countries. The reader, therefore, who is eager to pursue his studies further into any given subject or to acquire greater detail is not left without the references to the contributions of special workers which are likely to afford him just the information that he requires. The following are the food products which are analytically discussed in the 14 chapters: alcohols (including glycerine), aldehydes, carbohydrates, acids (including vinegar and fatty acids), oils, fats and waxes, butter, soap and lubricants, proteids and cereals, milk and preservatives. The book sets forth an excellent ntroductory scheme of training in organic analysis.

THE WANT OF PROPERLY EQUIPPED MORTUARIES.—On Sept. 4th Mr. Troutbeck, coroner for the South-Western District of London, made some observations at Battersea respecting the lack of means for the preservation of bodies. Some of those which his jury had sat upon that day were in an advanced state of decomposition. He remarked that the weather had something to do with this state of affairs but considered none the less that there was pressing need for a better state of things at public mortuaries. The Battersea mortuary was one of the best equipped in London, yet it fell far short in regard to means for preserving the dead. Mr. Troutbeck went on to say that in any similar case where suspicions of poison existed the difficulties of the pathologist and toxicologist would be very great, and he concluded that the existing state of affairs was due to divided authority, one authority appointing the coroner, another providing the court, and another the mortuary. The authorities as at present constituted often did not possess the power to provide that which they ought to provide; there was, for example, no power to provide a toxicological laboratory. It was merely a matter of chance that the authorities were enabled to employ pathologists who had laboratories of their own, otherwise toxicological examination in London would be impossible in connexion with coroners' courts. Having mentioned that in hospitals and in foreign mortuaries corpses were preserved from corruption by proper scientific means Mr. Troutbeck concluded by urging re-arrangement of the law. The jury intimated that they concurred with his views

New Inventions.

A BACK-FLOW CATHETER FOR URETHRAL IRRIGATION.

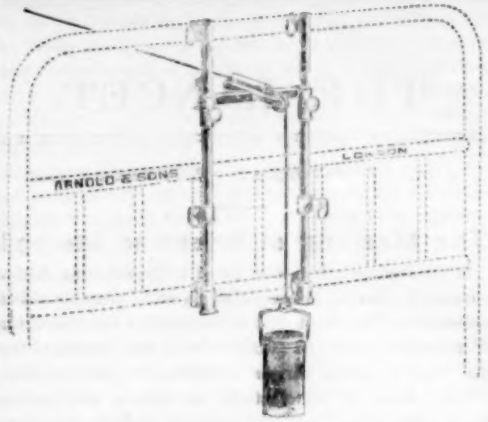
OPINIONS differ very much concerning the treatment of gonorrhœa by the use of antiseptic and astringent injections, but the majority of those who see much of the disease order injections of some kind to be used during one stage or another. There can be no doubt that if an injection is to do any good at all it must be properly administered, and much of the failure of injections to hasten the cure must be attributed to the inadequate method of use. Messrs. Down Brothers of 21, St. Thomas's-street, London, S.E., have made for me a back-flow catheter through which any quantity of fluid can be made to irrigate the whole urethra without entering the bladder. The instrument is composed of a metal catheter, with a bulbous extremity, curved in the ordinary way. The eyes of the catheter consist of three apertures situated at the junction of the stem and the bulb. The greatest diameter of the bulb is three sizes larger than that of the stem. I have found that No. 4 for the stem and No. 7 for the bulb is the most useful size. The shoulder of the bulb fills up the urethra in front of the eyes and all the lotion escapes in a rapid stream at the side of the stem. The best arrangement is to attach the instrument by means of a rubber tube to a can containing one quart of the lotion. The instrument is passed with the ordinary precautions as far as the compressor urethræ, when it is naturally arrested. This is far enough for a case of anterior urethritis, but in posterior urethritis the instrument should be passed into the bladder, and then withdrawn until the bulb is felt to be just grasped by the vesical orifice. The douche can is raised three feet above the patient's bladder and the quart of lotion takes from three to five minutes to run out. An intelligent patient can be taught to do this for himself night and morning, and provided he sterilises the catheter each time there is no more risk of septic infection than when he uses an injection with an ordinary glass syringe. The rapid improvement in cases where it is used will soon convince anyone of the practical utility of the device. An ordinary glass syringe can, of course, be used instead of the douche can.



ERNEST W. HEY GROVES, M.D. Lond., F.R.C.S. Eng.,
Assistant Surgeon to the Bristol General Hospital.

THE NORLEDGE EXTENSION APPARATUS.

THE illustration represents an extension apparatus for surgical purposes which seems to me to possess advantages over those at present in use. Some of its special features are that it is free from vibration, simple in construction, easily fixed, portable, sightly, and can be rendered aseptic. The apparatus consists of a frame having adjustable hooks by which it can be hooked on to the rails at the foot of the bedstead and to the frame is adjustably attached a tube through which runs a cord, having at one end means of attaching it to the leg of the patient and at the other end a weight or shot-can, a pulley being provided for the cord to pass over. A convenient form of the apparatus is two bars, each having a rigid hook at the upper end and an adjustable one at the lower end. On these bars slides a cross-bar, detainable in any required position and carrying a tube having a pulley at one end,



through which tube passes the cord. The makers are Messrs. Arnold and Sons, West Smithfield, London, E.C.

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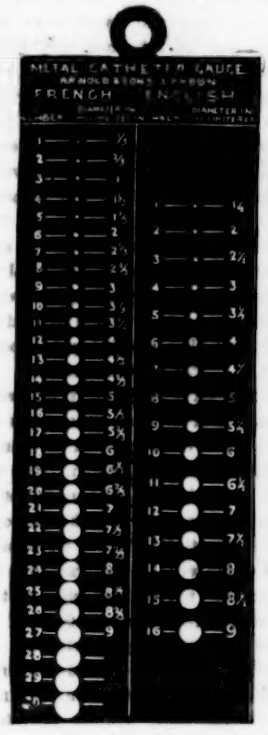
Surgeon to the Royal Victoria Hospital, Bournemouth.

A NEW METAL CATHETER GAUGE.

I HAVE usually found that a considerable amount of vagueness exists, not only about the numbers and diameters of the French and English catheters respectively, but also on the relation the two scales of measurement bear to each other. To obviate this I have devised the following instrument, of which the accompanying figure is an illustration. By an omission the last three numbers of the diameter in millimetres of the French catheters have been left out in the figure. The gauge is made of German silver (polished) and is 13½ inches in length and 5 inches wide. On the left-hand side the number and diameter in millimetres of the French catheters are represented, and on the right side the English. By using this gauge not only can the number and diameter in millimetres of any metal catheter be determined at once (and this is a great advantage where the numbers are only placed on the stylets, which are liable to be put back into the wrong catheters) but also the relation the French scale bears to the English can be appreciated at a glance. The gauge can be sterilised by boiling and does not tarnish. It has been made at my suggestion by Messrs. Arnold and Sons, West Smithfield, London, E.C., who after several trials have successfully surmounted all the technical difficulties in connexion with its manufacture.



CECIL H. LEAF, M.B. Cantab., F.R.C.S. Eng.,
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THE LANCET.

LONDON: SATURDAY, SEPTEMBER 8, 1906.

The Meaning of Scientific Method.

IF the average citizen were asked to describe the method pursued in scientific investigation, he would probably answer somewhat to the effect that it consisted in the observation of phenomena and the record of what was observed—that the chemist mixes various substances in his test-tubes or heats them in his crucibles and retorts and observes what takes place; that the biologist collects his plants or animals and arranges them according to their resemblances in groups; that the astronomer studies the movements of the stars and notes their positions and relations on a map. The average citizen might add that the use of instruments of precision is necessary to such observation, but he would still probably regard mere record of particulars as the essence of science. In such an answer there would undoubtedly reside a large portion of truth, since accurate observation is the first requisite of every branch of knowledge and the majority of researchers must be content with such work alone, leaving to a chosen few the processes of inference and generalisation; but it would be a small portion only of the whole truth. Yet it may be doubted whether many among the large army of workers in the field of science would be prepared to supply off-hand an adequate account of the methods pursued in scientific advance. We reason intuitively and leave it to the logicians to analyse the processes of thought. Hence actual advances in knowledge have always preceded the formulation of new methods of scientific investigation. In days long ago the mathematical sciences were carried to a high pitch of perfection, and with this came ARISTOTLE'S masterly analysis of the deductive method of reasoning, to which little or nothing has been added in more recent times. The revival of the study of nature, which in the sixteenth century followed the overthrow of blind belief in traditional wisdom, was the forerunner of BACON'S "Novum Organum," or new instrument of scientific inquiry as analysed by him. This was the inductive method, which had been known indeed to ARISTOTLE but not invested by him with that importance which it was afterwards to attain. Yet, in truth, neither the inductive method by which we infer universal laws from a series of particular instances, nor the deductive method by which we descend from general rules to individual phenomena, is alone sufficient for our purpose when we investigate the secrets of nature. Both intellectual instruments must be used in combination, as was seen by MILL, whose work coincided with the rapid growth of scientific knowledge at the beginning of the nineteenth century, a growth which has continued uninterrupted to the present day. Very interesting examples of the mode in which great scientific discoveries have been made are given in a collection of lectures[1] recently delivered at Oxford, which are now published by the Clarendon Press. One of the most notable instances is that of NEWTON'S discovery of the law of gravitation as set forth in his "Principia." The laws of motion as we know them were first discovered by inductive reasoning, and from them NEWTON deduced mathematically—that is to say, deductively—the truth that every body which moves in an elliptical orbit around another body lying in one of the foci of that ellipse is drawn towards the latter by a constant force. The planets are therefore drawn towards the sun by such a force. Starting from this result of deductive reasoning NEWTON advanced by a further induction to the universal law that all bodies are mutually attracted, in other words to the general law of gravitation. Both methods of logic were therefore necessary for this grand scientific generalisation.

The methods of reasoning adopted in the field of science do not differ in essence from those employed in forming judgments in the affairs of ordinary life; but the degree of accuracy demanded is higher, and for the purpose of attaining thereto constant verification of the conclusions arrived at is practised. The attitude of the scientific observer is one of scepticism on all points which seem to depend merely upon the dicta of authority. Accepted conclusions are constantly being discarded in the light of further knowledge, and closer and closer approximation to the truth thus constantly obtained. Only a short time ago nothing seemed more certainly established than the immutability of the chemical elements; now the old Heraclitean doctrine of continual change seems to be in process of revival and the mutability of the elements themselves is freely canvassed, if not yet generally accepted. If this constant change of doctrine is true of the physical sciences such as chemistry and astronomy, how much more may we expect to find it in the more complicated and therefore backward branches of knowledge dealing with life and with mankind? Here opinions must undergo a ceaseless, if often imperceptible, evolution. The once firmly established doctrines of Individualism and of Free Trade are now being subjected to a scrutiny as to their claims to constitute true generalisations, and the result of the examination is as yet obscure. Unfortunately, in the sphere of politics scientific methods are discarded; a system in which conclusions are reached by counting heads of partisans on either side is not conducive to a rapid process of ascertainment of truth. Yet even to political questions the logical methods to which we have previously alluded are ultimately applied, and the advance of knowledge is only checked, not arrested, by the idols of the market-place to which any particular generation bows the knee. That even temporary obscuration of truth is possible in these matters is due to the complexity of the problems presented by social inquiries, from which it results that accuracy such as is attainable in the more abstract sciences is here impossible.

But this complexity is not confined to social questions, it is present to an almost overwhelming degree even in the comparatively simple problems of physiology; it is still more perplexing in connexion with the

[1] Lectures on the Method of Science. Edited by T. B. Strong, Dean of Christ Church. Oxford, at the Clarendon Press. 1906. Pp. 249. Price 7s. 6d. net.

realm of nervous and mental activity. In the science of pathology, and consequently in the associated art of medicine, the difficulties of research are manifest. Experiment is practically impossible on the human subject and verification of theories is thus as a rule prevented. Nor are extraneous obstacles arising from accepted doctrines and popular prejudices by any means absent. But the physician must endeavour rigorously to apply the methods of scientific research in these as in other fields. He must resolutely decline to submit his judgment to the fetters of ancient authority, however firmly they may seem to be riveted. He must submit his conclusions constantly to the touchstone of facts. He must realise that reason will be the guide to his steps, and that the passions of controversy and the prejudices of popular ignorance are alike hostile to true progress. Innovators are usually disliked and run the risk of being regarded as heretics and socially, if not ecclesiastically, excommunicated. Some of these independent spirits, however, in the end win niches in the Temple of Fame, when the discredit of having placed obstacles in their path becomes very terrible. Formerly it was expected that the public would be ready to view all new medical discovery with suspicion, but the present condition in the world of medical science does not quite agree with this picture. The public seems to us to be almost gullishly anxious for new theories in diagnosis and new processes in therapeutics, and a grave responsibility is thereby put upon the medical man. He has to make up his mind, often upon insufficient data, whether certain developments are proceeding along the line of proven knowledge and constitute progress, or whether they are vagaries to be disregarded and condemned. If he acquiesces in the new suggestions he knows that the public will readily follow his suit, if he puts his veto upon a trial of them he, the man of science, may be a stumbling-block in the path of science. How true is the saying, Once a student of medicine always a student. Only the resolute intent to keep abreast with developments in our knowledge can assist the practitioner in such difficulties.

The Feeding of School Children.[1]

WE have already had opportunity of commenting on the proposed measure for enabling local authorities to provide meals for those children in public elementary schools who are in need of such assistance, and have pointed out the difficulties which the problem presents when practical means have to be devised for carrying out this necessary duty. On the one hand, it is clearly indefensible to insist upon any child undergoing school discipline when owing to insufficient food it is not in a fit state to benefit by the instruction given. On the other hand, any attempt to institute a system of free meals for indigent children brings us face to face with the problem of selecting those who are proper recipients of such charity, for we must prevent any possibility that merely lazy or careless parents should take advantage of the provision to enable themselves to shirk a still further portion of their duties towards their children. The report of the Select Committee to whom the Bill introduced into the House of Commons was referred is now issued, and we have further means of judging of the form the measure is likely to take. The report shows clearly that the committee was deeply impressed with the difficulties to which we have alluded and is anxious to find means of steering safely between Scylla and Charybdis. It points out in its preliminary remarks that evidence goes to show that the number of children who are in actual need of food is relatively very small, one witness stating that in West Ham, a very poor district, the number of children fed at present by a charitable agency was only about 1000 out of a total of over 53,000 attending the schools. Nor is the need a constant factor, being much less urgent in the summer than in the winter months. At present there do not exist any satisfactory means of ascertaining the real number of children who are in need of sustenance, since the teachers are not trained so as to be able to distinguish starvation from other causes of wasting—and indeed it is not by any means a simple problem even for a medical man in all cases. We are glad to see that the committee realises the importance of that medical inspection of children at our elementary schools upon which we have always insisted. Thus it reports: "The committee attach importance to the power proposed to be given in Clause 35 of the Education Bill now before Parliament to make such arrangements as may be sanctioned by the Board of Education for attending to the health and physical condition of the children." Whatever view medical men as citizens may take as to many of the provisions of this last-mentioned Bill, there can be no hesitation among them, as members of the medical profession, in endorsing this proposal as useful and indeed indispensable.

Turning to the economical recommendations of the committee, we find that it holds that the educational authority and not the boards of guardians should have the responsibility of administering the measure. The cost of the meals should be recovered from the parents of the children, but if they are unable or unwilling to defray it the guardians are to be called upon by the school authority to find the money and are to undertake the recovery of it from the parents. All inquiries into the condition of the children are to be made by the educational authority, the Poor-law officers affording them any aid required, but precautions are to be taken to avoid any stigma of pauperism attaching to particular children. It is not, however, contemplated that in the majority of instances the money for the actual provision of food should be supplied by public funds; it is hoped that it would generally be forthcoming from charitable sources. The school authorities are merely to furnish the necessary buildings and to supervise the distribution of the meals. In the case of any very poor districts, in which voluntary agencies may fail to supply the food, public money may be made available, but not to an amount exceeding that produced by a ½*d.* rate throughout the district. As we have previously pointed out, we have little confidence in this limitation; should the amount thus provided be insufficient the outcry for more will be irresistible when the principle of providing meals has once been adopted. There is also a real danger that charitable contributions will dry up when it is realised that the subscribing donors are merely

[1] Special Report and Report from the Select Committee on the Education (Provision of Meals) Bill, 1906, and the Education (Provision of Meals) (Scotland) Bill, 1906, with the Proceedings of the Committee. (Wyman and Sons, 109, Fetter-lane, E.C.)

saving the rates and taking upon themselves what they may well regard as a duty to be shared by all alike. In the case of parents wilfully refusing to feed their children or to pay for the meals provided it is clear that legal compulsion must be employed, and the question arises as to the authority which is to undertake the task of prosecution. The committee recommends that this duty should be discharged either by the guardians or by the Society for the Prevention of Cruelty to Children. With regard to the latter, we cannot refrain from questioning the advisability of intrusting public work to a private body enjoying no recognised State sanction. The society does much admirable work, but it should not be called upon to undertake duties which the State by legislation has laid upon itself.

Apart from this feature we have little criticism to offer upon the suggestions of the committee. In breaking such new ground as is here done, first steps must be hesitating and tentative. The local educational authority is to delegate its powers to a committee comprising representatives of the voluntary subscribers as well as of itself, along with delegates from the board of guardians and from the local branch of the Society for the Prevention of Cruelty to Children, if the two last elements seem desirable. Stress is laid upon the importance of encouraging the association of voluntary helpers with the school authorities. The meals are not to be given in the actual schoolrooms if this can be avoided, owing to the difficulty which would thus be created of properly cleansing and ventilating the rooms. This is certainly a wise provision. So, too, is the stipulation that it should not be made a condition of appointment for any teacher that he or she shall, or shall not, take part in dispensing the meals provided for the children. We cannot but think that the action of the London Education Committee in exacting this service from their teachers is indefensible. The health of the teacher should be no less an object of consideration than that of the children, and such additional work as is implied in supervising the distribution of meals tends to curtail unduly the midday period of rest which forms a necessary prelude to the afternoon labours. Teaching a large class is in itself an exacting duty, quite sufficient for the strength of most of those who are engaged in this occupation. It is unjustifiable to add to the stress by a demand that the teachers shall "serve tables." Precedent suggests that special helpers should be provided for this duty, or the more technical work for which the teachers are appointed will inevitably suffer.

Death Certification at Bootle and Elsewhere.

THE infantile and uncertified mortality in the borough of Bootle, which was formed in 1868 out of a northern suburb of Liverpool, and includes a large portion of the Liverpool docks, has lately been made the subject of a controversy between the medical officer of health, Mr. T. W. NAYLOR BARLOW, and the county coroner, Mr. SAMUEL BRIGHOUSE. The latter gentleman, a layman, has defended himself with somewhat unnecessary energy against what he conceived to be imputations cast upon him by the former, but which were, in reality, no more than suggestions for the better protection of the public by a modification of the procedure now adopted for inquiring into the probable causes of uncertified deaths. Mr. BARLOW will, we think, be fully sustained by public and professional opinion in the position which he has assumed, and it may be hoped that Mr. BRIGHOUSE, on farther reflection, will realise that he has stood upon the defensive somewhat prematurely, and before he had been made the subject of attack. In Mr. BARLOW'S annual report for 1905, which was issued in June last, he called attention to the contrast between the steadily improving and very satisfactory general death-rate of the borough and the high infantile death-rate, the former having been 17·3 per 1000 and the latter 153, including 83 deaths from diarrhœa. He expressed his conviction that the period of 42 days, which may now elapse between the birth and the registration of an infant, is far too long, as it permits many children to escape registration altogether. The parents leave the district before the six weeks have expired and migrate to another in which no inquiry is made about them. The interval also gives ample time for the death of an infant from neglect or improper feeding before any intimation of its having been born has reached the lady sanitary inspector of the district, whose first visit of inquiry may be met by the reply that the child is dead and buried, and often by abundant evidence that it has died from some cause which her advice and instruction might have obviated. Mr. BARLOW'S mortality tables show that in Bootle about 30 per cent. of all deaths of children under one year occur during the first six weeks, and he thinks it probable that many of these lives would be saved to the State if births were registered immediately.

So far, of course, there is nothing which could afford the coroner any reasonable ground of complaint, but a subsequent passage of the report sets forth that in 38 cases within the borough the cause of death had not been certified by a medical man and that no inquest was held upon any one of them. Mr. BARLOW goes on to say that it is within the discretion of the coroner to hold an inquest in any case of uncertified death, and states his belief that that official decides the question on information forwarded to him by the police. He then points out that the ordinary policeman is quite unsuited to make inquiries for the information of the coroner, and that the existing practice really leaves the cause of death to be determined and declared by the relatives of the deceased. He expresses a strong opinion that an inquest should be held in every case in which the death is uncertified, unless the coroner can satisfy himself as to the facts, not by the report of a policeman or coroner's officer, but by that of a medical man who knew the deceased and who may have attended him recently. He thinks it especially necessary that an inquest should be held when the uncertified death is that of a young child, and he refers to the facility, no doubt only too familiar to him from official experience, with which undesired or illegitimate children may be got rid of. On June 20th, soon after the issue of the report and actually in the course of an inquest arising out of an explosion at Haverford, the coroner addressed the jury and the press on the subject of Mr. BARLOW'S observations, and described them as "instructive, amusing, and inaccurate." The "amusing part," he said, "was that which ascribed to the lady

sanitary inspector and the medical officer an ability to determine that all infants whom they had not seen either alive or dead would have lived if the mothers had received the lady's instructions as to feeding and care." We will not dispute with the coroner as to whether or not this "part" is "amusing," but will be content to point out that we have not been able to find it in the report. The coroner went on to say that if he "held inquests so as unnecessarily to obtrude into private sorrow, the whole of South Lancashire would be inflamed against him," and we trust that we shall not be thought wanting in respect either to the gentleman himself or to his office if we express a hope that the press report may be inaccurate and that he did not really say anything so foolish. Mr. BRIGHOUSE, however, went on to say that there had been "48 cases of uncertificated death instead of 38," and that every case had been "carefully investigated by the police," which was precisely the charge brought by Mr. BARLOW against the customary procedure. The coroner added that the police "often inclosed medical reports," that he had held an inquest in every uncertified case of the death of an illegitimate child which had been reported to him, and that the "reflections" cast upon him by Mr. BARLOW were "uncalled for," and not substantiated by any statistics or facts. The jury, at the close of the coroner's address, adopted a vote of confidence in him, and he, in expressing his thanks, "was glad to find they did not think him to be as black as painted by Mr. BARLOW." The health committee of the borough immediately took steps to support its officer, and three days later, on June 23rd, it passed a resolution fully approving of the observations in Mr. BARLOW'S report, "which contained no reflection on the district coroner," and expressing the opinion that the present mode of registering uncertified deaths is "highly unsatisfactory." On August 1st this resolution was accepted and confirmed by the borough council as a whole.

In the borough of Bootle, as in many other places, there may possibly be wheels within wheels the working of which is not immediately manifest to distant observers; but apart from this consideration it seems plain that the somewhat too sensitive *amour propre* of the coroner has led him to attach a sense of personal animadversion to words which should be interpreted only as a criticism of official customs. Our Registration Act has been in operation for nearly 70 years, and no one, unless it be Mr. BRIGHOUSE, now disputes that its provisions are insufficient for the proper protection of life, and especially of infantile life. Its deficiencies can be, and are in great part supplied by coroners, and we have no doubt that the general feeling among them is one of willingness to hold an inquest in every case of infantile death, in which there is even a suspicion that life may have been sacrificed by the negligence or the self-indulgence of parents. Except in cases of manifest violence the police are not qualified to make preliminary inquiries for the purpose of discovering the cause of death. They do not possess the knowledge necessary for sifting the statements made to them, and cannot form any sound conclusions concerning their probability or their value. The police are, as a rule, an excellent and a worthy body of men, but they are drawn from classes in which the traditional value of infant life is not high. It was, we believe, a jury of Devonshire farmers, empanelled to inquire into the cause of death of an infant discovered in a ditch, who returned the verdict "we find as it bain't no odds to nobody," but the sentiment of which this verdict was an expression is very widely diffused among the working classes, and not least among the rural peasantry, from whom our policemen are largely recruited. We wish that statistics were obtainable by which the infantile mortality of districts in which coroners are lax could be compared with the same mortality in districts in which they might be described as severe, for we have little doubt that a very marked difference would be displayed between them.

Annotations.

"Ne quid nimis."

POPULAR ERRORS REGARDING MUSHROOMS.

THE distinctions between edible and poisonous mushrooms are usually based on empirical grounds, with the result that mistakes of a serious nature may, and often do, occur. The subject has recently received the attention of Professor Labesse, who has described in *l'Anjou Médical* the characters whereby edible and poisonous mushrooms are distinguished in various localities. Many popular tests for determining the wholesomeness or otherwise of a mushroom are based on colour, odour, taste, and texture; on the presence of rose-coloured lamellæ or a milky juice; on the situation in which the fungi grow; and on the action of the mushrooms on various substances, including gold and silver coins, milk, and onions. Thus, according to one popular notion, mushrooms having a blue, violet, green, or red colour are unfit for food, but this test would exclude many wholesome fungi, including the green *Russula* and the green *Clytocybe*. It has been said that only mushrooms which do not change colour when cut are good to eat, but *Lactarius deliciosus*, some species of *Boletus*, and many other mushrooms which change colour are perfectly harmless, while, on the other hand, *Amanita muscaria* and some other fungi which do not change colour when cut should be avoided. Professor Labesse points out that the presence of an agreeable odour is not an infallible test of a good mushroom, as a species of *Amanita* (*l'Amanite phalloïde*) is especially dangerous in spite of its pleasant odour. There is a dictum among certain amateur gatherers that a good mushroom has a grateful taste. This test is useful in many cases but not in all—e.g., *l'Amanite phalloïde* and *la Fausse Oronge* (*Amanita muscaria*) are scarcely bitter but quite unfit for eating. As regards texture it is generally regarded that compact, brittle mushrooms, with a dry skin, are edible, but Professor Labesse considers this to be a mere prejudice, as the eating of certain species of *Russula* would seriously indispose anyone placing confidence in these characters. Mushrooms with rose-coloured lamellæ are usually considered to be edible but this is a false notion, some species of *Volvaria* and other poisonous fungi possessing this character. Mushrooms with a milky juice are regarded as dangerous by some collectors but this rule must not be followed too literally as many excellent members of the genus *Lactarius* would thereby be excluded. The situation in which mushrooms grow is a very uncertain criterion of edibility. Thus, it would be dangerous to regard all mushrooms growing in meadows, open fields, and roadsides as good, since many suspected kinds grow in such places.

On the other hand, mushrooms growing in coniferous woods and under trees generally have been condemned, but the succulent *Lactarius delicious* grows in coniferous woods and the edible *Pholiota* grows under poplars, while species of *Helvella* and *Hydnum*, which flourish in shady woods form a wholesome dish. The blackening of a gold or silver coin or ring does not prove a mushroom to be poisonous; the blackening is generally due to more or less decay in the mushroom, as fresh mushrooms, whether poisonous or not, fail to blacken these metals. The curdling of milk by mushrooms is another property which has nothing in common with toxicity, the cause of the curdling being attributable to the presence of an acid or a ferment. An old custom consisted in dipping a white onion or a clove of garlic into the cooking vessel containing the mushrooms and noting whether the latter turned brown or not; the presumption that only noxious mushrooms are turned brown by this treatment is not justifiable, since some non-poisonous varieties do change colour in this way while some poisonous varieties do not. It is a common belief that slugs and insects attack edible mushrooms, but this is by no means universally true, as the deadly *Amanitas* are attacked by slugs, while many wholesome fungi are respected by these depredators. The tests so far described are largely of a rule-of-thumb nature, but another test which has received wide acceptance depends upon the fact that many poisonous fungi are surrounded by a *velum universale*, notable examples being the intensely poisonous subgenera *Volvaria* and *Amanita* and the puffballs. But, like all other rules, this is open to exceptions, including the genus *Agaricus*, to which the common mushroom, *A. campestris*, belongs. Professor Labesse considers that there are no practical empirical means by which amateurs may with confidence decide whether an unknown fungus is good to eat. There is often a risk taken in eating mushrooms, and those who do not wish to incur the risk are reminded by Professor Labesse of the method adopted by Gérard in 1850. He boiled the mushrooms for some time in salt water, threw away the water, and exposed the mushrooms to the air. He fed his family for nearly a month upon all kinds of poisonous mushrooms treated in this way and found them to be nutritious, though less palatable than mushrooms cooked in the ordinary way. Professor Labesse suggests that not more than one mushroom in ten is poisonous and that the best test consists in rejecting those which have a ring at the base of the stipe. Deadly mushrooms as a rule possess a ring or annulus consisting of the remains of the *velum partiale* which covers the young mushroom and is fractured during growth. In order to apply this test the mushrooms must be gathered with care. Unfortunately, in rejecting mushrooms possessing this character some excellent varieties are rejected in addition to the commonest poisonous varieties. Amateurs should know the characters of the mushrooms which grow in their neighbourhood, restrict themselves to certain kinds which they know to be edible, and in cases of doubt should abstain altogether.

THE PSYCHOLOGY OF THE SELFISH MOTORIST.

THE advent of the motor-car has afforded us an illustration of two human traits: one the long-suffering of some non-motorists, the other the blindness of some motorists to the claims of others to the use of the road. This latter trait has developed to such a degree that the medical question may arise whether we may not have here some pathological phenomena associated with the possession of a motor-car; whether, in fact, the driving of such a vehicle may not lead occasionally to such a condition of auto-concentration as to leave the driver for the moment utterly unmindful of all other interests than his own. Be this as it may, this callousness to the rights of others only became apparent with the introduction of motor-cars, and the disease, if so it may be termed, has undergone a marked exacerbation during the recent spell of rainless weather. Behind many motor-cars is a trail of blinding dust noticeable in some circumstances for fully half a mile, producing a temporary eye and throat soreness among those whom it envelops and rendering the air for the time being quite irrespirable. Of all this too often the selfish motorist appears to be entirely unconscious; he passes on his way regardless of all the discomfort which he occasions, unmindful of what he leaves behind, and concentrated alone on what is to be seen ahead. Without the least compunction he rushes through the villages, raising excrement-bearing dust into the atmosphere to be carried indiscriminately into the eyes and throats of the villagers and on to the meat, milk, and other articles exposed for sale as human food. Much of all this obvious injustice might be avoided were all motorists (as some are) possessed of elementary good taste or fellow feeling, and were ready to slacken speed in circumstances wherein the dust which is raised is likely seriously to inconvenience other users of the public thoroughfares. The pathological side of the selfish motorist is still further accentuated by the fact that for the most part he is creating a nuisance for his own private purposes. There is no reason, other than self-indulgence, why the selfish motorist should pass from one place to another under conditions which materially detract from the comfort of other people, raising fæcally laden dust and increasing the chances of dust-borne infections or augmenting the cough of the unfortunate consumptive living by the wayside. It must be recognised that there are motorists who are mindful of the comfort and claims of those who use the high roads for purposes other than those of pleasure, but their virtues are obscured by the failings of the unscrupulous scorcher, and they suffer with him in the general esteem.

THE PREVENTION OF CRUELTY TO CHILDREN ARISING OUT OF NEGLECT TO SEEK MEDICAL AID.

WE are all familiar with the cases in which parents or other responsible adults are indicted for manslaughter when a child has died, and it has been made plain at an inquest that life would have been saved by timely medical aid. Similarly actions for neglect arise when the child has been caused unnecessary bodily pain by the failure to provide medical assistance. Examples of this kind of legal proceeding have been afforded by the members of the sect called the "Peculiar People," who regard the summoning of medical aid as contrary to the teaching of the Bible, and sometimes by cruel and negligent parents obviously indifferent to the welfare of their offspring. "Christian Scientists" are apparently too well conversant with the danger of prosecution to carry their principles in the case of their children to the bitter end, and, so far as we are aware, no such prosecution as that recorded in another column (see page 696) has been instituted against one of them. We think it highly desirable that the full extent of the legal responsibility of parents in the class of cases indicated should be tested to the utmost before judges, but it is only possible thus to elucidate the law when ample pecuniary means for doing so are possessed by both parties. The case in question, it will be seen, is one in which, through no desire to be unkind to a child (who is still alive) and probably with a sincere desire to save him from suffering pain, a mother refused to submit him to a surgeon, and the National Society for the Prevention of Cruelty to Children acted as prosecutor in compelling her to comply with medical advice. We should

like to see settled the extent of a parent's criminality under the statutes relating to cruelty to children in circumstances of this kind, and we print a full account of the proceedings for this reason. It will be plain to medical readers that Mr. E. MacDonald Judge gave his evidence fully and clearly, and gave none that he was not entitled to give. It will be seen also from the report that it was made quite plain by him that no surgical interference with the child would have been undertaken upon his opinion only, or without full examination and consideration by what the magistrate termed a "specialist"—i.e., by the surgeon upon whom the responsible duty of operating might fall. Mr. Baggallay said that "the society should have had a specialist," but how this was to be done he did not suggest. The mother had apparently at some time allowed Mr. Judge to examine her child, but she had refused to take him to the hospital. By what means could the mother have been compelled to submit her child to the examination of the specialist? In the absence of such examination a consulting surgeon, it is true, might have corroborated or contradicted Mr. Judge's deductions from the facts which he described, but there is nothing in Mr. Baggallay's observations to show that an opinion thus formed and expressed would have been regarded by him as satisfactory. But the high value set by Mr. Baggallay upon the specialist's knowledge is a little inconsistent with the order to the little boy to exhibit his powers of walking in the court, apparently in order that a layman might estimate the extent of the disease and the treatment required. We quite understand that on the face of it the necessity of a further operation seemed remote when the child was seen to cross the court without crutches, but only a surgeon can say how far such a feat has any real significance. Certainly the inferences could hardly be drawn from it that there was absence of medical evidence proving the necessity of operation, or that there was undue haste on the part of the National Society for the Prevention of Cruelty to Children. The mother had declared her intentions in plain terms not to have a further operation performed, but delay might be very undesirable in the interest of the patient. If we here mention the patient in the second place only, we do so in order to accentuate our view that throughout the hearing the feelings of the mother seem to have been the matter primarily considered, and that the good of the patient was treated as a matter of secondary importance. The prosecution might with advantage have produced the evidence of the surgeon at the hospital, or hospitals, where the previous operations had been performed, but it must be remembered that to bring such witnesses needlessly to a police court is undesirable and expensive; and prosecutions of this kind are not undertaken by the police or by the Treasury, but by a benevolent society whose means are not unlimited and whose methods and expenditure are rightly subjected to careful scrutiny. Mr. Baggallay is known to everyone as a humane and learned magistrate, but whatever the rights and wrongs of this particular case may be, questions have been opened up by it that have not been settled by the magisterial decision.

A CASE OF ANTHRAX AT EXETER.

A RECENT inquest held at Exeter disclosed a case of death from anthrax where probably a fatal result might have been averted had the infected person sought medical aid with promptitude, while the difficulty of tracing the source of the poison was strikingly exemplified. The deceased, a man named Burden, employed at a tanyard, observed pimples upon his left arm on August 11th, which had begun to be badly swollen on the following Wednesday. On the next day, Thursday, he first consulted a medical man, and on the following day, Friday, he was admitted to the Royal Devon and Exeter Hospital, where he died two days later, microscopic examination confirming the opinion formed at the hospital that he was suffering from anthrax. Evidence was given as to the care taken by the employers with regard to hides, as to the provision of gloves for the men, and the posting of notices to meet cases of the kind described. A member of the firm said that he would have driven the deceased to the hospital at once had he known of the symptoms when they first appeared. With regard to the origin of the anthrax, the firm dealt in English market hides, and for two or three years had not bought foreign hides, with the exception of 50 Oporto hides purchased three weeks before the man's death. These, however, according to the evidence, he had not handled, nor, in fact, had they been dealt with at all. The deceased had handled many hides during the days preceding the development of the symptoms referred to, but had only skinned one animal, to which attention was thus directed. It was a cow, the property of a farmer who was named, and it had died suddenly, but a veterinary surgeon had stated that it had been struck by lightning, and the deceased had observed a mark on its skin which, in his opinion, confirmed this view. It does not appear from the report before us that either the farmer or the veterinary surgeon was called to give evidence, but it is not easy to believe that they and the man who skinned the cow should all have been mistaken, and the case remains mysterious, as the jury found by their verdict, which ran: that the deceased accidentally contracted anthrax but that there is no evidence to prove how he did so.

THE TREATMENT OF ACUTE EMPYEMA BY SIMPLE INCISION.

THE current teaching is that empyema should be treated by resection of the ribs and drainage. In the *American Journal of the Medical Sciences* for July Dr. J. F. Leys advocates the treatment of acute empyema by simple incision—a simplification which he thinks ought to commend itself to general practitioners who do little surgery and are loath to undertake such an operation as resection of ribs. In the case of chronic empyema he admits that adequate drainage may not be secured without resection of one or more ribs. Such removal of bone is required when expansion of the lung does not proceed and is not an effective aid to the expulsion of pus. Special forms of drainage tubes he also thinks unnecessary. The treatment of empyema by simple thoracotomy is not new and has been successfully practised since the time of Hippocrates but has fallen out of fashion. In 1899 Dr. E. Andrews of Chicago deplored the fact that surgeons advocated resection of ribs in all cases of empyema. Professor W. Osler writes: "It is sad to think of the number of lives that are sacrificed annually by the failure to recognise that empyema should be treated as an ordinary abscess by free incision. The operation is by no means serious." Dr. Leys relates five cases of acute empyema successfully treated in the United States Naval Hospital by simple incision. They all occurred in boys between the ages of 16 and 17 years and in four the empyema was a sequel of pneumonia. The treatment was such as any practitioner could carry out. Local anæsthesia was produced with a lump of ice dipped in salt and held against the chest, with the ether spray, or with ethyl chloride. The instruments used were a scalpel for incision, a pair of blunt straight scissors for enlarging the incision, two pairs of hæmostatic forceps to hold open the incision for the flow of pus, to introduce the drainage tube, and to catch bleeding vessels if encountered, about 12 inches of three-eighth inch rubber tube fenestrated at

intervals of an inch, and four large safety pins. All these instruments and the dressings were sterilised. The following is one of the cases. A lad, aged 17 years, was admitted on March 4th, 1901, with pneumonia of the left lower lobe. On the 17th there were signs of right pleural effusion. The temperature declined irregularly and was normal from the 18th to the 20th, when exploration showed that the effusion was serous. The effusion increased rapidly and the fever returned. On the 24th the effusion reached to the clavicle and 1925 cubic centimetres of creamy pus were removed by aspiration. On the 25th under local anæsthesia a free incision was made in the sixth interspace near the posterior axillary line. Two fenestrated tubes six inches long were inserted and about 1500 cubic centimetres of pus were removed. The temperature fell to normal. Good drainage was maintained and the wound was dressed daily. On the 31st pulmonary gymnastics were begun. By April 15th the daily discharge amounted to only two ounces. The tubes were gradually shortened and one was removed on the 19th. The pus contained an abundance of pneumococci and other cocci. The discharge continued until May 12th and on the 14th the second tube was removed. The fistula had completely healed on the 24th. Complete recovery was attained.

AN INTERNATIONAL CONGRESS ON THE CARE OF THE INSANE.

AN international congress on the care of the insane (*Congrès International pour l'Assistance des Aliénés*) will be held in Milan from Sept. 26th to 30th. The two principal subjects of discussion will be: (1) Improvements in the Care of the Insane and especially in their Home Care (*assistance familiale*) in various countries from 1902 to the present day; and (2) the Creation of Departments of Observation, Supervision, and Isolation in Asylums and Colonies, together with an account of the methods which have given the best results. Besides these there will be six subjects of discussion relative to the care of recently recovered lunatics; the care of special classes of insanity, such as delusional, epileptic, alcoholic, and moral insanity, with special reference to home care; psychiatric and neuropathological dispensaries; sanatoriums for nervous diseases; the economic and social results of the care of the insane; and the relation of the State to the care of the insane. Dr. L. Frank, superintendent of the asylum at Münsterlingen, Thurgau, Switzerland, will in the course of the meeting describe his scheme of an international bureau for the scientific study of the causes of insanity and the best means of prevention. The official languages of the Congress will be Italian, German, English, and French, the latter being recommended for preference. Members of the Congress pay a contribution of 20 francs and ladies accompanying them pay 10 francs. The treasurer, to whom remittances may be sent, is Dr. Edgardo Morpurgo, 5, Via Bigli, Milan.

THE USE OF ALCOHOLIC FLUIDS.

WE have received from the secretary of the Newcastle-upon-Tyne United Temperance Electoral Council, Mr. Robert P. Moncrieff, the president of which is Dr. F. C. Coley, a copy of a circular which, we are informed, has been sent to every member of the medical profession in Newcastle, Gateshead, and Gosforth. The circular opens with a letter from Mr. Moncrieff stating that he declines to become an annual subscriber to the Royal Victoria Infirmary because sundry members of the liquor trade have consented to supply wines and spirits to the infirmary for 1906. The circular goes on to state that there is a great deal of falsified wine, that spirits are adulterated with a variety of matters, and concludes with a quotation, attributed to the late Sir B. W. Richardson, in which that physician says that when he wanted to administer alcohol he wrote it on the prescription as absolute alcohol. The circular ends with a query initialled by Mr. Moncrieff which runs as follows: "How can medical practitioners fulfil the conditions laid down by Dr. Richardson, when they employ brewers, publicans, and wine merchants as their dispensers?" We think that this circular is an unwise production. We are fully aware of the evils wrought by the over-consumption of alcoholic drinks. We are also fully aware that some brewers and distillers and wine merchants sell beer, spirit, and wine which are not everything that they should be, but the circular implies that the purveyors of liquor whose names are given will deliberately supply the Newcastle Infirmary with falsified stuff. It allows that vinous ethers do good in certain cases of illness but it asks, "If ethers are required why not administer them in a pure medicine?" Mr. Moncrieff ought to know, as he has taken up so vigorous and combative an attitude, that genuine brandy, rum, champagne, and burgundy, all of which there is not the slightest difficulty in getting provided application is made to a reputable house and the proper price is paid, do contain ethers "in a pure medicine." The controversy which is now going on concerning the use of alcohol entirely ignores the fact that all alcoholic liquors, apart from pharmacopœial tinctures, when administered in a hospital should be so administered on account of the secondary products which they contain. A circular such as that which lies before us defeats its own object, for its arguments are those of a person who has not studied the subject concerning which he writes. Perhaps Dr. Coley would be well advised to moderate the enthusiasm of Mr. Moncrieff.

THE OCULAR FACTORS IN SPINAL CURVATURE.

IN the last three years Dr. G. M. Gould of Philadelphia has called attention in a number of papers to the far-reaching ill-effects of eye-strain, while his opinion upon European methods of refraction-testing is known to be highly uncomplimentary. In return several critics of Dr. Gould's theories consider that he sees the result of eye-strain in pathological circumstances where it has no existence. He has lately attributed spinal curvature to eye-strain, and this time his views appear to be in accord with those of other observers. If artificial astigmatism be produced in a normal person with a cylindrical lens at an axis of 75° vision will be obscured unless the head is tilted 15° to the right so as to bring the axis into the vertical line. Then the perception of vertical objects, such as trees, houses, letters of the alphabet, &c., is clearest. Similarly a patient with this astigmatism will tilt his head 15° to the right in order to obtain clear vision. In the *New York Medical Journal* of July 28th Dr. H. Augustus Wilson, professor of orthopædic surgery in the Jefferson Medical College, confirms Dr. Gould's conclusions and reports two cases. In 1900 a boy, aged 14 years, was brought to Dr. Gould with symptoms of eye-strain. The refraction was as follows: in the right eye, − S., 0·25 + C. 5·25, axis 75°; in the left eye, + S., 0·50 + C. 6, axis 75°. There was also spinal curvature. The ametropia was corrected and the patient was referred to Dr. Wilson for the treatment of the spinal curvature. He found functional scoliosis in one long curve extending from the pelvis to the head. The head was inclined to the right. The boy was in the habit of carrying a heavy bundle of newspapers under his left arm, while with his right hand he used to throw and fold the papers. This involved excessive use of the right side. After wearing the glasses for two months and undergoing a short course of exercises the spine became normal. In the second case, a girl, aged 14 years, was seen three years after deformity of the spine had been

observed by her parents. She presented the usual form of S-shaped scoliosis with rigidity. The head was persistently tilted to the right. She was wearing spectacles which had been obtained from an optician and suffered from migraine. She was sent to Dr. Gould who found that her refraction was as follows: right eye + 0·87 + C. 0·62, axis 75°; left eye + S. 0·5 + C. 1·25, axis 90°. The ametropia appeared to have been at least a factor in the development of the scoliosis, for though the usual gymnastic and manipulative methods secured increased flexibility of the spine and greater muscular development, the head remained tilted to the right until the ametropia was corrected. After wearing suitable glasses for several days the head assumed a more normal position.

THE THIRD CONGRESS OF MEDICAL RADIOLOGY AND ELECTROLOGY.

THIS Congress, originally fixed to be held in the autumn at Amsterdam, has had its place of meeting transferred to Milan. Professor Bozzolo of Turin, one of the first among European physicians to prove the efficacy of radiotherapeutics in diseases of the circulation, has been chosen president of the organising committee. An adjunct to the Congress, at once novel and instructive, will be the "Esposizione" of apparatus illustrative of radio- and electro-therapeutics, many continental firms being represented in the exhibition rooms. All professional men desirous of assisting at the Congress are requested to communicate with the Secretary, Dr. Carlo Luraschi, 11, Via Sant Andreu, Milan.

THE ICE-CREAM SEASON.

ON August 30th and 31st respectively an inquest and a police court summons were heard in London which were complementary the one to the other. The inquest was upon the death of a child, aged eight years, and was held at Stepney. Evidence showed that the child had eaten some ice-cream wafers bought from an Italian in the street. She was attacked with sickness and died on the following day. Mr. N. W. W. Meadows, who attended her, stated that her symptoms were exactly those of cholera. He considered that death was due to exhaustion from epidemic diarrhœa accelerated by eating ice-cream probably made under insanitary conditions. A verdict of death by misadventure was returned. On August 31st at Marylebone police court Angelo Romano, an ice-cream vendor, was summoned by the St. Pancras borough council for failing to take proper precautions for the due protection of the ice-cream sold or stored on his premises from infection or contamination. Dr. J. F. J. Sykes, the medical officer of health, in giving evidence, produced a utensil found on the defendant's premises which was used for the purpose of making up what are called ice-cream wafers. In the corners and angles was a quantity of fermenting and decomposing milk. Dr. Sykes remarked that there had been many cases of ptomaine poisoning in the district and that many children had died from diarrhœa after eating ice-cream. He further stated that anyone partaking of ice-cream taken from the utensil in the condition in which it was found would probably become ill. Mr. Paul Taylor expressed surprise at Dr. Sykes's remark that many children had died from diarrhœa after eating ice-cream, and fined the defendant 20*s.* and costs, saying that the case showed how important it was that the Act of Parliament should be enforced. So-called ice-cream, which is chiefly made of milk and eggs, is very popular among the poorer classes in hot weather and its method of preparation in many cases is filthy in the extreme. The Act of Parliament is doubtless sufficient if enforced with vigour but the difficulties in the way of inspection are very great. However, the well-known and extremely poisonous effects of dirty ice-cream should stimulate local health authorities to do everything in their power to prevent the manufacture of this sweetmeat under such grossly insanitary conditions as is not infrequently shown to be the case.

A CONTRIBUTION TO THE HISTORY OF MEDICAL LEGISLATION IN NORTH AMERICA.

IN the American *Medical Library and Historical Journal* for April, 1905, Mr. Charles Perry Fisher, the librarian of the College of Physicians of Philadelphia, publishes the full text of a Bill which possesses some historical interest. It was entitled "An Act to Regulate the Practice of Physic and Surgery within this Commonwealth;" it had its first reading in the House of Representatives of the Commonwealth of Pennsylvania on March 24th, 1794, and was "ordered to be laid on the table." It was to have been brought up for its second reading on March 31st, but it was not read at that meeting and no further reference to it can be found. Apparently, therefore, the Bill did not become law. It is known, however, that medical legislation in America is of much older date than this, for Dr. Francis R. Packard in his "History of Medicine in the United States," published in 1901, states in the chapter on Medical Legislation in the Colonies that the General Assembly of New York on June 10th, 1760, passed a law regulating the practice of medicine in the city of New York, and that on Sept. 26th, 1772, an Act was passed to "Regulate the Practice of Physic and Surgery within the Colony of New Jersey." The Bill of 1794 consisted of four sections, the second of which provided that unqualified practitioners "shall forfeit and pay for the first offence the sum of fifty pounds ..... and for the second and every subsequent offence shall forfeit and pay the sum of one hundred pounds." One of the clauses stated that the Bill did not prohibit any person from drawing teeth, bleeding, or cupping, or from giving assistance in cases of sudden emergency.

THE PHYSIOLOGICAL ACTION OF A RECENTLY DISCOVERED AFRICAN ARROW POISON.

Dr. Charles Bolton has investigated the toxic properties of an arrow poison which was obtained by Dr. D. Alexander from a medicine-house at Ghasi, a pagan town in Northern Nigeria.[1] According to Dr. Alexander the poison, when fresh, forms a semi-fluid, sticky, black substance; it is smeared on sticks and is scraped off and heated when required for re-dipping the arrows. It appears to contain the juice of a variety of fig, the placenta of which is used in the manufacture of the poison. Dr. Alexander states that he saw a native shot in the abdomen with a poisoned arrow and that death resulted, apparently from failure of the heart, in about 25 minutes. Dr. Bolton dissolved the poison in 0·86 per cent. salt solution for intravenous injection into animals, including cats, rabbits, guinea-pigs, and frogs. He found that the poison selects muscular tissue for its action, but there is no evidence that it produces any action upon the central or peripheral nervous system. It paralyses the voluntary muscles and causes death by a direct action upon the muscular tissue of the heart. The first effect of the poison is to stimulate directly the muscular coats of the arterioles and thus to cause a rise of arterial pressure, with the result that the vagus centre in the medulla is excited, causing a slowing of the rhythm of the heart, together with a fall in the arterial blood pressure. The irritability of the heart muscle is greatly increased and soon the vagus fails to hold it in check; as a consequence the rhythm of the heart is

[1] Proceedings of the Royal Society, Series B, July 23rd, 1906, p. 13.

accelerated and the blood pressure therefore rises to a higher level as the inhibition of the vagus is overcome. It is, however, probable that the chief factor in maintaining the high blood pressure is the constriction of the peripheral vessels. The rhythm of the heart becomes more rapid and irregularity appears, the heart finally passing into delirium cordis and ceasing in diastole.

THE Huxley lecture will be delivered at Charing Cross Hospital Medical School on Monday, Oct. 1st, as we announce elsewhere. The lecturer for this year is Professor Ivan Petrovitsch Pawlow, professor of physiology in the University of St. Petersburg, who is taking for his subject "Recent Advances in Science and their Bearing on Medicine and Surgery."

THE Semmelweiss memorial which has been erected in the Elisabeth-square of Budapest will be unveiled on Sept. 30th. The ceremony will begin at 10.30 A.M. with a meeting in the hall of the University of Sciences. The memorial itself will be unveiled at midday.

FIRST REPORT OF THE EXPEDITION TO THE AMAZON, 1905.

(From the Liverpool School of Tropical Medicine.)

BY H. WOLFERSTAN THOMAS, M.D. McGILL,
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FOR the purpose of investigating the distribution of disease, and in particular of yellow fever, along the Amazon the expedition left its headquarters at Manaos, Brazil, and proceeded up the river. Iquitos, in Peru, was reached on Dec. 31st, 1905. A stay of three months was made there and a report, embodying the results of observations made during that period, has been drawn up for presentation to the Peruvian Government. The present communication is an abstract of that report.

The town of Iquitos lies along a high bank overlooking the river Maranon. Along the river front are situated the municipal buildings and the chief business houses. Parallel with the front road is the Calle de Prospero; on it are most of the shops. Numerous streets intersect it; these run from the river front back to the swamps and on them are situated most of the private residences. As Iquitos has increased in population the town has extended up and down along the river bank but the tendency appears to be to extend backwards in the direction of the swamps. The richer class occupy the closely-built central part of the town; the poorer class tend to congregate in settlements on its outskirts. The better class live in well-built houses; the poorer inhabitants in cane- or mud-walled huts. The roads are in a wretched state; they are undrained, full of ruts and holes, and in wet weather become almost impassable. Iquitos, especially along the river bank and near the swamps, is noted for the number of its mosquitoes. Houses near the river front are never free from these pests and unless wire screens are used the situation becomes intolerable after dusk. The poorer class store no water on their premises; it is brought as it is needed from neighbouring springs, and as a result mosquito larvæ were never found in their houses. 69 houses belonging to persons of the better class were examined. In 63 of them stegomyia fasciata was breeding; in six larvæ of culex were found. Neither water reservoirs nor privies are protected from mosquitoes by wire netting; stegomyia and culex were frequently found breeding in both. As is usual, stegomyia was found to breed freely in the various discarded pots and pans, bottles and barrels which invariably accumulate about tropical establishments. In the yard attached to one house were 16 large barrels, nine tubs, seven large oil cans, a large heap of empty tinned meat cans, and a collection of nearly 300 bottles. All were stored so as hold a little water. 90 per cent. of them contained larvæ of stegomyia fasciata. This house was noted for the number of its mosquitoes and at one time several deaths from "vomito negro" had occurred there. A general cleaning up of the yard was advised and all the disused barrels were stored end upwards. A marked diminution in the number of mosquitoes immediately resulted. The better class, educated and richer people, are therefore largely responsible for the large numbers of stegomyia fasciata existing at Iquitos. Nearly all the municipal and public buildings are sources for the propagation of culicidæ. Culex bred freely in the stagnant water of overgrown or chocked ditches, in pools of rain-water, and in holes along the river's bank. Larvæ of stegomyia were very rarely seen in these situations. Anopheles bred chiefly in the swamps near the town.

A general survey of the public health of Iquitos was made. Iquitos is, comparatively speaking, well situated and the better class are well housed, but the maintenance of the town is bad and the poorer class particularly live under unhygienic conditions. Drains are for the most part bad and usually consist of mere trenches cut in sandy soil; a few are constructed with cement bottoms and sides. None are properly maintained and they are consequently often blocked. In the poorer quarter there is hardly any attempt at drainage. There is no public water-supply; water for drinking is obtained from various springs or from rain-water stored in cisterns sunk in the ground. There is no adequate system of sewage disposal; badly designed and improperly maintained privies are frequently employed. The poorer classes of the inhabitants defæcate indiscriminately in every part of the town; as a result fæcal contamination of drinking water is common. Bacilli coli communis and eggs of ankylostoma duodenale were frequently found in water currently used for this purpose. There is no system of garbage disposal; household refuse is deposited almost anywhere.

Notwithstanding these insanitary conditions Iquitos is not an exceptionally unhealthy place. The prevailing diseases from January to the end of March, 1906, were whooping-cough, measles, bronchitis, and infantile diarrhœa amongst children; gastritis and gastro-enteritis, bronchitis, and malaria amongst adults. Other diseases seen were leprosy, amœbic dysentery, tuberculosis in various forms, and one case of epithelioma. Syphilis and gonorrhœa are very prevalent and are being disseminated along the rivers by launchmen and peddlers. The expedition had hoped to see cases of the "vomito negro" of Iquitos. This disease has a high mortality and is locally considered to be distinct from yellow fever. No cases of it or of yellow fever occurred during the stay of the expedition at Iquitos. It seems, however, probable, from information given by local medical men, that they are one and the same disease.

To obtain some idea of the prevalence of malaria amongst the general population 764 persons were examined. In the blood of 98 the "malignant tertian" type of malarial parasite was found. The majority of those infected were Indians and men employed in launches along the rivers. Only two were infected amongst 97 school children between the ages of four and 14 years examined at Iquitos. The hæmoglobin of these persons was examined at the same time as their blood. The low average amongst children, Indians, and the poorer classes was exceedingly striking, since it varied between 45 and 72 per cent. The blood of the better class showed a higher average, varying between 72 and 80 per cent. The explanation of this marked anæmia is believed to be ankylostomiasis. Practically all the native children are infested with this parasite. An accompanying infection with ascaris lumbricoides or various tæniæ was frequently observed.

The following diseases were observed amongst domestic animals at Iquitos. In cattle piroplasmosis, malignant œdema, and perhaps quarter evil. Trichinosis was seen in swine. Amongst poultry occurred chicken cholera and fowl diphtheria. Trypanosoma Lewisi was observed in rats.

From the data at our disposal we conclude: 1. That the town of Iquitos is relatively free from malaria and that the majority of cases occurring there have become infected in the rivers adjacent to Iquitos. 2. That ankylostomiasis is present and widespread amongst all classes; that the infection is spreading chiefly by reason of the unhygienic disposal of fæcal material. 3 That diseases other than gastric disturbances, dysentery, malaria, measles, and whooping-cough, are comparatively rare; that syphilis, gonorrhœa, and tuberculosis are now attacking the Indians. 4. That the present surface sewers are quite unable to drain the town properly. 5. That an adequate water-supply is urgently required. 6. That more rigorous sanitary laws are needed; that the sanitary department should extend its powers so as effectively to deal with (*a*) the removal of night soil; (*b*) removal

of garbage; (*e*) prevention of the pollution of the springs; (*d*) prevention of the committing of nuisances; (*e*) the compelling of all householders to screen receptacles for storage of water, &c., to prevent mosquitoes propagating; and (*f*) a more thorough meat inspection and the prohibition of the indiscriminate slaughtering of animals outside the slaughter-house. 7. That a public hospital is greatly needed.

In the original report means of realising the desired improvements are suggested in detail.

Manor, May 18th, 1906.

GLYCERINATED CALF LYMPH.

WE have received for publication the following Preliminary Report to the Local Government Board on the Results of Sustained Subjection of Glycerinated Calf Lymph to Temperatures below Freezing Point, by Dr. Frank R. Blaxall and Mr. H. S. Fremlin:—

These experiments were in the first instance undertaken to determine whether the active agent of vaccine lymph could withstand, without loss of potency, temperatures below the freezing point. Afterward they were directed to ascertain whether sustained subjection of glycerinated calf lymph to a temperature 5° (Centigrade) below freezing point could be utilised as a means of maintaining a reserve and store of lymph without risk of loss of its specific activity. General experience and numerous special experiments have shown that the agents most productive of weakness and failure in glycerinated lymphs are age and heat. Thus, the active "vaccine" agent present in crude lymph when collected from the calf loses its potency if subjected for five minutes[1] to a higher temperature than 57·5° C. Again, glycerinated lymph becomes vaccinally inert if kept at 37° C. for more than 36 hours. Similarly, the extraneous micro-organisms apt to be present in glycerinated lymph are eliminated the more quickly the higher the temperature to which the lymph is exposed.[2] At 37° C., for instance, their elimination is accomplished in 36 hours or less; contrariwise, at 10° C., and at lower temperatures, their elimination is very slow. It was anticipated therefore that if the everyday deleterious influence of heat on lymph could be neutralised, such tendency to loss of activity—which in present conditions is associated with "age" of lymph—might be greatly mitigated and a method of storing glycerinated lymph with full preservation of its potency thus obtained.

Our first experiments were commenced in January, 1900, with "freezing mixtures." Samples of glycerinated lymph contained in small test tubes hermetically sealed were placed in a mixture of ice and salt. The temperature to which the tubes were thus subjected was found to range in practice from 9° below to 10° above zero Centrigrade; and no means being at hand of obtaining a low, and at the same time stable, temperature, the samples were at the end of a week withdrawn from the "mixture." These samples were then tested on calves, side by side with other samples of the same glycerinated lymph which throughout the experiment had been kept in an ice chest at 10° C. Excellent vesicles were developed by both sets of samples showing that the vaccine organism had not suffered any impairment of potency by an exposure of uncertain duration to a temperature of −9° C.

Our second experiment was to subject samples of glycerinated lymph to a much lower temperature—namely, that of liquid air which is the equivalent of −180° C. This we were enabled to do by the courtesy of Dr. Macfadyen and Mr. Rowland of the Lister Institute. Samples from four glycerinated lymphs were placed in leaden capsules each holding about three cubic centimetres and these were inserted in a vessel containing liquid air, companion samples of the same glycerinated lymphs being kept as controls in an ice chest at 10° C. At intervals of one, two, three, five, and 11 weeks the samples were withdrawn from the liquid air for the short time necessary for allowing capillary tubes to be charged from them, similar procedure being adopted with the corresponding samples in the ice chest. These capillary tube samples of the lymphs were forthwith tested on calves to ascertain whether their potency had been affected. At the end of 11 weeks exposure of the samples to liquid air ceased but the experiment was prolonged by further storage, alike of experimental and control samples, in an ice chest at 10° C. for an additional 15 weeks with a view to testing from time to time and at the end of that period samples of both sorts on calves.

The results of the inoculations of the samples on calves were as follows. Up to 11 weeks the limit of the period of subjection of samples to the temperature of liquid air both sets of samples gave equally good vesicles on calves; no difference was distinguishable between them. Thus, sustained exposure to the temperature of liquid air for near upon three months had in no way impaired the potency of the glycerinated lymphs. On the other hand, the results obtained with the two sets of samples after the additional storage for 15 weeks at 10° C. were very different. Those samples which had in the first instance been exposed to the temperature of liquid air continued, after 15 weeks' additional storage at 10° C., to yield good vesicles on the calf, whereas the control lymphs yielded, after further keeping in like fashion, only poor vesicles or were quite inert. It appeared, indeed, that advantage had accrued to those sections of the glycerinated lymphs which had been subjected for 11 weeks to the temperature of liquid air.

Our third experiment was on a larger scale. It consisted in placing glycerinated lymph for a year in a "cold storage depôt" in London, in which the temperature was held to be maintained with great regularity at 22° F. or −5° C. Samples from 92 glycerinated lymphs were taken for test in this sense. These samples at the date of the experiment varied greatly in age; the oldest was eight months and the youngest 16 days from the date of collection. Two samples, each consisting of about one cubic centimetre of emulsion, were taken of each lymph; and these were placed in separate small test tubes, corked and sealed. Each such test tube was then placed in a wooden case and this case was tightly corked. One set of 92 samples was placed in a sealed package and inserted in the cold store depôt on Oct. 3rd, 1902, and the other (companion) set, on the same date, was placed in an ice-chest at 10° C. in our laboratories. There they remained in each instance for one year. On Oct. 2nd, 1903, these packages were withdrawn from cold store and from ice-chest and their contents were examined. All the samples which had been stored at −5° C. were in good condition but in the case of many of those which had been stored at 10° C. the emulsion had to a considerable extent soaked away or dried up. The several samples were now tested for potency on calves, inoculations being made on three separate occasions on these animals within a period of three weeks, the samples being meanwhile stored at room temperature. On each occasion each "cold store" sample was tested side by side with its companion ice-chest sample, on one and the same calf. As a result the "cold store" lymphs yielded 91·4 per cent. "insertion success," whereas the "ice chest" lymphs yielded no more than 16·2 per cent. (See Table I. annexed.) It deserves to be noted, moreover, that the failures with the "cold store" lymphs occurred only when these having been three weeks removed from the store had been further kept at room temperature. It was observed, too, that the vesicles yielded on the calves by the "cold store" lymphs were of better appearance and quality than those yielded by the "ice-chest" lymphs.

A fourth experiment on the same lines was made with 91 glycerinated lymphs. Two samples of each, taken as before, were placed in small glass test tubes, which were then corked and sealed, and each such test tube was in turn packed in a wooden case duly corked. On this occasion each set of samples was in addition inclosed in a tin box, the lid of which was soldered on, so that the box was hermetically sealed, the purpose being to obviate, if possible, the drying up of emulsions such as had occurred in the third experiment in the case of samples stored in the ice-chest. Of these 91 glycerinated lymphs the oldest at the date of the experiment was 13 months from the time of collection and the youngest nine days. The tin boxes remained respectively in the cold store at −5° C. and in an ice-chest at 10° C. for a whole year, at the expiration of which period the boxes were withdrawn and the contents examined. As before, the samples which had been in the cold store were found in good condition, and on this occasion drying up of those which had remained in the ice-chest at 10° C. had to a considerable extent been checked, if not entirely prevented. All the samples were inoculated on calves, in the same way as

[1] Medical Officer's Report to the Local Government Board, 1900-01, p. 634.

[2] Medical Officer's Report to the Local Government Board, 1902-03, p. 649.

before, on three occasions, the last inoculation being made 32 days after removal of the tin boxes from the cold store and from the ice-chest respectively, the samples having been kept after removal from the tin boxes meanwhile in an ice-chest at 10° C. As a result of inoculation of calves the "cold store" lymph yielded 98·9 per cent. and the "ice-chest" samples 41·8 per cent. insertion success. And, as before, it was noted that the vesicles yielded by the "cold store" samples were of better appearance and quality than those yielded by samples from the "ice-chest" (see Table II. annexed).

The above two series of experiments showed definitely enough that, as tested on calves, cold storage of glycerinated lymph for a year at −5° C. prevents that deterioration and loss of potency which commonly occurs to lymph stored at the higher temperature 10° C. Bacteriological examinations were made of all these samples at the time of withdrawal from the cold store at −5° C., and ice chest at 10° C. respectively. The results showed that storage in glycerine for a year or more, whether at −5° C. or 10° C., serves to practically eliminate the contained extraneous organisms. At this stage, therefore, it was sought to ascertain the effect of the cold storage treatment on lymph subsequently employed in human vaccination. For this purpose 14 glycerinated lymphs contained in small sealed test tubes were packed in a hermetically closed box, placed in the cold store at −5° C. and were retained there for four months and 23 days. When withdrawn these lymphs were examined and tested for potency in the usual way. These preliminary tests having proved satisfactory the 14 lymphs were issued to public vaccinators on an average 19 days after removal from the cold store. Employed by public vaccinators in the vaccination of 16,771 individuals they gave a percentage success of: case, 98·8; insertion, 94·2; slightly higher figures than the average success-rate obtained in the preceding year with the current lymph of the establishment—viz., 98·4 per cent. case, 93·5 per cent. insertion, success. The current lymph of the previous year had been at the time of issue "aged" one month to two months, so that the cold store lymph in spite of its greater age gave higher percentage results than the lymph ordinarily issued.

From these experiments it would appear: 1. That in glycerinated lymph the active agent of vaccine not only can withstand freezing but can survive a temperature 180° C. below freezing point for a considerable time and this without loss of potency. 2. That glycerinated lymph can be retained in a cold store at −5° C. for a year without diminution of its potency, whereas glycerinated lymph, stored at 10° C. for a year, parts with its activity to an uncertain but considerable extent. 3. That sustained subjection to cold appears to be in no sense hostile to the active agent of vaccine; that, on the contrary, lymph thus dealt with was capable of producing excellent vesicles on calves and that the results obtained with it in human vaccination were wholly satisfactory.

F. R. BLAXALL.
H. S. FREMLIN.

TABLE I.—*Results on Calves of Glycerinated Lymph subjected to a Temperature of −5° C. in a Cold Store, or to 10° C. for 12 months, 1902-03:—*

Calves inoculated.	Date of experiment.	Results on calves. Cold store, −5° C. Insertions:— Taken.	Cold store, −5° C. Insertions:— Failed.	Ice chest, 10° C. (control). Insertions:— Taken.	Ice chest, 10° C. (control). Insertions:— Failed.
1	Oct. 2nd, 1903 ...	45	0	0	45
2	Oct. 9th ,, ...	39	0	13	23
3	Oct. 23rd ,, ...	12	9	4	17
	Total	96	9	17	88
	Percentage success...	91·4		16·2	

TABLE II.—*Results on Calves of Glycerinated Lymph subjected to a Temperature of −5° C. in a Cold Store, or to 10° C. for 12 months, 1904-05:—*

Calves inoculated.	Date of experiment.	Results on calves. Cold store, −5° C. Insertions:— Taken.	Cold store, −5° C. Insertions:— Failed.	Ice chest, 10° C. (control). Insertions:— Taken.	Ice chest, 10° C. (control). Insertions:— Failed.
1	March 17th, 1905 ...	90	1	40	51
2	March 31st ,, ...	89	2	37	54
3	April 14th ,, ...	91	0	37	54
	Total	270	3	114	159
	Percentage success...	98·9		41·8	

THE FORTHCOMING ELECTION OF DIRECT REPRESENTATIVES FOR ENGLAND AND WALES TO THE GENERAL MEDICAL COUNCIL.

WE have received the following circular with a request for its publication:—

To the Chairmen of the Divisions of the B. M. A. in England and Wales.

27, Wimbledon Park-road, Wandsworth, S.W., 1st September, 1906.
Telephone: 631 Battersea.

DEAR SIR,

ELECTION OF DIRECT REPRESENTATIVES FOR ENGLAND AND WALES TO THE GENERAL MEDICAL COUNCIL, 1906.

As you are probably aware the scheme prepared for the nomination through the British Medical Association of candidates for election to the G. M. C. this year has been abandoned. There seems, however, to be no reason why there should not be an organised attempt to return three medical practitioners who would prove acceptable to the majority of the profession as their representative on the G. M. C. In order to do this it becomes necessary for some one to take the initiative. I would therefore submit for the consideration of the members of the profession within the area of your division the following broad suggestions and would ask you (as the time is short) to be good enough to consult them by means of a meeting to be held before the 15th October under the auspices of your division. The suggestions are these:—

1. That as the time is short and only three are to be elected, no territorial arrangements be attempted.

2. That the whole of the local profession be asked to attend your division meeting. This could be done by inviting them to a scientific paper and discussion, and the question appearing as an item on the agenda. A copy of this circular could be sent if it were thought desirable.*

3. That each agenda do contain the names of all candidates known of up to date (see list at end of letter).

4. That this list of candidates is not to be limited to those who were nominated by the divisions of the Association.

5. That at each such meeting those present do vote. Each to have three votes. No plumping allowed. The chairman, who shall be scrutineer, with one other to be elected at the meeting, shall place against each candidate the total number of votes he has obtained, and post this list as provided in Clause 6.

6. That these lists be sent on or before Saturday, 20th October, to Dr. Hugh Ker, President of the Metropolitan Counties Branch and late resident in Birmingham district, who has kindly consented to act as scrutineer with Dr. Bateman (Medical Defence Union) and Dr. Hugh Woods (Ldn. & C. M. P. Society). The address is Tintern, Balham-hill, London, S.W. The envelope to be marked "General Medical Council."

7. That those three candidates who have the highest aggregate total of votes be considered the candidates preferred and to be recommended to the profession. Each area participating shall at the meeting held to consider the list also pass a resolution to support in all ways possible these three whoever they may be (e.g., by addresses, by notices on all agendas, post-cards, &c., issued, &c., &c.).

8. These three names with their addresses will be sent for publication to THE LANCET and *Journal* on October 27th. The agenda calling the meeting could give this information in advance; and thus save subsequent circulars.

I append a list of those who are known to be candidates and have placed them in alphabetical order. I would explain that the divisions of the British Medical Association seem to offer the necessary local machinery for the above object, and this is the sole reason for availing ourselves of their aid. The union of the profession is our great object. I feel sure I need hardly add that I hope this communication will be considered by no means a dictation but rather an attempt to coördinate the profession in the consideration of a matter of vital importance to itself and trust you will cordially approve and support it. A similar attempt has lately been made in London to obtain the wishes of the profession as to certain candidates. No steps were taken to withdraw any candidate who was standing. A selection was made; every member

was duly advised of the choice and the result was eminently satisfactory. No pledges whatever were asked or given. After the publication of the three names heading the list those candidates would be justified through their own committees or alone to take any advantage of the voting they considered desirable. There can be no expectation of a unanimous response to the scheme this year. I would only suggest that, as I am informed it will meet with the ready acceptance of a large number of the profession, we can hope that at future elections they will look to something similar as best suited to voice their wishes, and as a ready means by which to influence the indifferent members of our profession to vote for candidates generally recommended.

Believe me, yours faithfully,

LLEWELLYN WILLIAMS, Chairman,
Wandsworth Division, British Medical Association.

P.S.—If you decide to do what you can in the matter during the short time at our disposal, would you kindly send me a post-card, so that some idea may be formed of the progress being made.

List of candidates known.—G. H. Broadbent (Manchester), Geo. Brown (Cornwall), Langley Browne (West Bromwich), J. F. Bullar (Southampton), Andrew Clark (London), A. Godson (Cheadle), Geo. Jackson (Plymouth), H. A. Latimer (Swansea), L. S. McManus (London), J. Rutherford Morrison (Newcastle-on-Tyne), C. J. Renshaw (Ashton-on-Mersey), J. M. Rhodes (Manchester), F. J. Smith (London), J. Smith (Chiswick), C. R Straton (Salisbury).

* Copies of this circular can be obtained if ordered of me before Sept. 15th at the rate of 2s. for every 50, or part of 50; if a large number were ordered the benefit of the printer's reduction could be obtained and money returned.

ENTERIC FEVER IN INDIA.

APPOINTMENT OF A STANDING COMMITTEE.

THE Standing Committee appointed by the Government of India to consider the prevalence and prevention of enteric fever in India held its first meeting on July 31st and subsequent days in the United Service Institute, Simla. The following officers who constitute the committee were present: Surgeon-General W. L. Gubbins, C.B., M.V.O., V.H.S., A.M.S., principal medical officer, His Majesty's forces in India (president); Lieutenant-Colonel J. T. W. Leslie, I.M.S., sanitary commissioner with the Government of India; Colonel R. H. Forman, R.A.M.C., principal medical officer, Bombay Brigade; Colonel D. Ffrench-Mullen, I.M.S., principal medical officer, Sirhind and Jullundur Brigades; Lieutenant-Colonel T. P. Woodhouse, R.A.M.C.; Lieutenant-Colonel D. Semple, R.A.M.C. (retired), director of the Central Research Institute of India; Captain Greig, I.M.S., on special duty, Central Research Institute of India; Captain L. W. Harrison, R.A.M.C.; Captain E. Blake Knox, R.A.M.C. (secretary); Captain A. B. Smallman, R.A.M.C.; and Lieutenant E. J. H. Luxmoore, R.A.M C. Major A. R. Aldridge, R.A.M.C., sanitary officer, Army Headquarters, was also present as expert in army sanitation.

His Excellency the Commander-in-Chief (Lord Kitchener) opened the meeting and in the course of his address made the following remarks: "I have thought it necessary to form this Standing Committee to advise us in our efforts to reduce the amount of enteric fever among the troops in this country and to coördinate the work of the whole medical profession, both civil and military, in this direction. It is hardly necessary for me to tell you that the three principal diseases the ravages of which cripple our troops are malaria, venereal, and enteric fever. I am glad to say that with regard to the two former we have made very successful progress in limiting the evil but when we come to enteric fever we are still, I am afraid, very much where we were. Last year we had no less than 1146 admissions and 213 deaths from this disease. This is an improvement on the record of 1904 but I regret to note that during the current year up to the end of June we had already 513 admissions and 126 deaths from this cause. It is evidently the duty of every one of us to fight enteric fever in every possible way. The ravages of cholera, the curse of the army in India in days gone by, are now happily a reminiscence of the past, and if we consider enteric fever as a no less dangerous disease than cholera, and are equally energetic in stamping it out, I have great hopes that we shall succeed eventually in bringing this scourge in its turn under control. We know that the time when young soldiers are most subject to enteric fever is on their first arrival in this country and subsequently at certain seasons of the year when a prevalence of the disease may be annually anticipated. The general lines on which we should work are, I think, fairly clearly defined but the details of elaboration form, it appears to me, the crux on which I hope your advice and efforts will be of the greatest assistance to us in dealing with this most insidious disease. I may briefly suggest as the main outlines for our action: (1) sanitation of cantonments and barracks; (2) isolation of enteric patients; (3) detection of the origin of an outbreak or of a single case; (4) inoculation; and (5) blood examination. On the subject of sanitation a great deal has been written and the success which has resulted from much practical work has proved what good results can be achieved in this direction. Ambala, for instance, has during the last 12 months been an instance of the good fruit which care and forethought, combined with attention to detail, can produce, and in many other places we have evidence to convince us that our efforts are not in vain. Of course, sanitary reform means the expenditure of money, but money will not be wanting for this object if we can be certain that we are working on the right lines. I will not enter into the much discussed question of the propagation and conveyance of the enteric germ through the medium of water, flies, dust, &c. These are evidently all means of infection, each in their degree, and measures for neutralising their pernicious influence must therefore be taken. In this connexion I will lay on the table for your consideration an able paper on the Sanitation of Cantonments, recently written by Colonel Thornhill. As regards the isolation of enteric patients and those who have been associated with them, I believe the importance of this precaution is now more fully recognised and enforced than used to be the case. All clothing and excreta must, of course, be most carefully disinfected. The detection of the origin of outbreaks of enteric fever is a question of the gravest importance, but it is also one of great difficulty. More than once, however, conspicuously successful results have ensued when immediate and careful deductions have been persistently followed up. All cases of slight fever should be viewed with suspicion and the patient sent to hospital for diagnosis. Early diagnosis is an absolute essential, for it allows of early prophylactic measures being enforced. No efforts should be spared to ascertain the origin of an outbreak, or even of a single case, for on the correct results of such inquiry depend success or failure in preventing recurrence. Commanding officers and the whole military machinery of the unit should be associated with the medical officer in the search for the originating cause and the precautions to be adopted to prevent the spread of the disease should be at once communicated to all concerned. Full use should be made of blood examination in following up any clue that may be found. I now come to the important subject of inoculation. You are doubtless aware that we have for some time past been engaged on experiments in India in antityphoid inoculation and I am glad to say that great advances have been made on the old system which prevailed at the time of the South African war. By antityphoid inoculation we can assist the soldier's tissues to resist the disease by providing him with fluids in the blood which react on, and cause disastrous results to, any bacterial invasion by typhoid germs. That by this means we can obtain fruitful results in India is proved by recent experience. Take the 17th Lancers, for instance. This regiment landed in India on Sept. 28th, 1905. The total number of enteric fever cases from that date to June 15th, 1906, has been 61, of whom 11 have died. Of these 61 cases two only had been inoculated and both recovered. 150 officers and men of the regiment were inoculated. The value of inoculation in other cases has been equally proved. But though we have in inoculation a possible solution of this grave question, I wish to point out to you, gentlemen, that this method of treatment is still comparatively in its infancy, and though we have, I think, sufficient data to justify us in introducing the system generally into this country, I look forward to great improvement in its operation being arrived at in the near future through the devoted and untiring energy of the professional experts in the subject, both in India and at home. I further anticipate that careful investigation and practical experience will lead us still further on the path towards doing away with some of the drawbacks which now attend the process. I have placed blood examination last, though I have referred to it before as an important factor in following up any clue to the discovery of the cause of an outbreak. We all, I think, realise that many men may, though apparently quite well, be carrying about the germs of enteric fever in their blood, and thus become the means of transferring the disease to others. This is often the case with convalescents

from enteric fever, even after a considerable period of isolation, and I consider that blood examination will therefore be of immense value in indicating to us where precautions are necessary and where our preventive efforts should be directed. As a layman I can only suggest these views for your consideration as experts, and I will now leave you to the consideration of the details of this most important subject, with the assurance that your views and opinions will be received by me with the greatest interest and in the confident anticipation that by following the practical lines which you may eventually suggest we may take an important step forwards towards stamping out enteric fever among our soldiers in India."

The committee then passed to consider carefully enteric fever with reference to its prevalence amongst various classes of individuals and communities in India. Statistics and evidence from the Army Medical Reports, the Annual Reports of the Sanitary Commissioner and others from the year 1856 being placed before it. The various sources of infection, excreta, fabrics, food, drink, &c., were then carefully considered and discussed in every detail and lines of present prophylaxis and a campaign for future prevention were laid down. In the matter of cantonment sanitation the committee had the advantage of the presence of the Inspecting Officer of Cantonments (Lieutenant-Colonel Thornhill, C I E.) whose views on this matter were of great assistance. The subject of antityphoid inoculation was fully dealt with. It is hoped that the decisions arrived at and the line of action laid down will have marked beneficial results not only to the health of the army but also to the community at large. The committee after five full days' sitting adjourned until the middle of October when reports on the practical working of its various resolutions will be further examined and, if necessary, added to.

Looking Back.

FROM

THE LANCET, *SATURDAY*, Sept. 6th, 1828.

THE REPORT of the Select Committee on Anatomy is an interesting, and, upon the whole, a satisfactory document. Mr. WARBURTON is especially entitled to the thanks of the profession and of the public for the zeal and ability which he exhibited as Chairman of the Committee; and although a wider scope might, perhaps, have been beneficially given to some branches of the inquiry, we are not on that account the less disposed to acknowledge the value of what has been effected by the labours of the Committee. .....

There is a part of Sir ASTLEY COOPER'S evidence, which is likely to have a stronger influence than any arguments which can be urged in favour of an alteration of the law, towards inducing persons of a certain intellectual calibre, to support any measure which may have the effect of putting an end to the practice of exhumation. The worthy baronet has not hesitated to declare that there is no person, however exalted his rank, whose body, if he were disposed to dissect it, he could not obtain.

"Does the state of the law actually prevent the teachers of anatomy from obtaining the body of any person which, in consequence of some peculiarity of structure, they may be particularly desirous of procuring?—The law does not prevent our obtaining the body of an individual if we think proper; for there is no person, let his situation in life be what it may, whom, if I were disposed to dissect, I could not obtain.

"If you are willing to pay a price sufficiently high, you can always obtain the body of any individual?—The law only enhances the price, and does not prevent the exhumation; nobody is secured by the law, it only adds to the price of the subject." *

This declaration is well calculated to produce an effect on the fears of persons to whose understanding reason could find no access. We shall have frequent occasion to return to the Report, and to the Minutes of evidence taken before the Select Committee.

* We have given Sir Astley credit for what, we presume, he meant to say; but it is evident that the worthy baronet has with his wonted felicity of diction, made his threat appear rather to the living, than to the dead.

THE BRITISH MEDICAL ASSOCIATION.

MEETING AT TORONTO.

(FROM OUR SPECIAL CORRESPONDENTS.)

THE seventy-fourth annual meeting of the British Medical Association commenced at Toronto on Tuesday, August 21st, under the presidency of Dr. R. A. Reeve, Dean of the Medical Faculty of the University of Toronto. This is the second time on which the Association has met in Canada, and the second time the place of meeting has been outside the British Isles, the other occasion being the meeting at Montreal in 1897. By Monday Toronto was beginning to get full of medical men from the United States, who are present in large numbers, while not a few members of the medical profession from Montreal, Quebec, and more out-lying provinces and cities of the Dominion had arrived. But the bulk of the travellers from England, Ireland, and Scotland did not arrive until the actual day of the opening ceremony. On the morning of Tuesday it was estimated that about 800 medical men had assembled, but by the time the proceedings of the congress were in full swing over 2200 members of the Association and accredited visitors were present. India, South Africa, Egypt, Australia, and the West Indies are all represented, while there are also visitors from Germany, and, as might be expected in Canada, from France. Many of the visitors from the mother country travelled by the Allan Line steamer *Ionian* and the Canadian Pacific Line steamer *Empress of Britain*, and on both vessels a most comfortable passage was enjoyed.

The choice of Toronto for the place of meeting was a distinctly happy one. The enthusiastic loyalty of the Canadians, their whole-hearted devotion to the mother country, and their more than justifiable pride in their own, with its vast extent and its great resources, perhaps nowhere find more open expression that in Toronto. Toronto strikes the visitor as the most English city in the Dominion in sentiment, but in outward appearance it is characteristically transatlantic. With a population of 262,749 it covers an area of 18½ square miles, possessing an extensive front to the lake. Its streets are for the most part wide and, with the exception of the most busy ones, well wooded, giving a peculiar charm to them, while there are no less than 25 public parks with an extent of 1640 acres. There is an excellent service of electric street cars which on some of the principal thoroughfares run almost continuously, so that it is easy to get from one part to another. Its public buildings are large, handsome, and in many cases beautifully situated, as pictures have recently shown in THE LANCET when illustrating the edifices connected with the Medical School. Toronto forms the meeting place of the two great trunk railway lines of Canada—the Grand Trunk and the Canadian Pacific, while a third great transcontinental railway line is in process of construction. It is consequently a great centre for travellers of all sorts.

The great influx of visitors, both from Canada and the United States, as well as the extra number of people visiting the city in connexion with the Annual Canadian Exhibition which opens on Monday, August 27th, combined to render the principal hotels full to overflowing, but a large number of those taking part in the meeting of the Association have either been entertained by private hospitality or most comfortably housed in some of the residential colleges near the University.

An informal dinner was given by the President-elect, Dr. Reeve, in the University dining hall on Monday, August 20th,

to meet the Lieutenant-Governor of the Province, Mr. William Mortimer Clark, K.C., LL.D.

A number of the sections, which are all located in the University and its constituent buildings, held preliminary committee meetings on Monday with the view of arranging their programmes, a very necessary and useful precaution when the mass of material set down for discussion is remembered. There will doubtless be many disappointments, as some valuable contributions have been taken as read, but that was unavoidable.

The inaugural ceremony of the Association took place in the afternoon of Tuesday in the New Convocation Hall of the University, and was in all respects a successful and imposing function. The meeting opened with prayer by the Rev. Principal MacLaren, the head of Knox College, after which a valedictory address was delivered by Mr. G. C. Franklin of Leicester, the retiring President. Dr. Reeve, introduced by Mr. Franklin, was then installed as President, Dr. F. N. G. Starr, the local secretary of the Association, presenting him with the badge of office. Various notable visitors were then received, the Mayor of Toronto, Mr. J. Coatsworth, extending a hearty welcome in the name of the city to all her guests. Professor Irving Cameron, Professor of Surgery in the University of Toronto, Dr. Alexander McPhedran, President of the Canadian Medical Association, and Dr. George A. Bingham, President of the Ontario Medical Association, joined in the words of welcome of the mayor. Sir Thomas Barlow, Sir Victor Horsley, and Mr. Franklin were then made vice-presidents for life of the Association. The presidential address which was then delivered contained an able review of the progress of medicine during the last decade. The President said that the credit for the success attending the second visit of the British Medical Association to Canada must rest largely upon those who have given valuable help in various ways. It had been, indeed, a labour of love to bring from their posts of duty in the old homeland the select and the elect of the profession. The gathering was in a sense a cosmopolitan one. International comity had always prevailed in the profession; disease knew no distinction of country or race and was the common lot of humanity. In the face of an ubiquitous foe it was natural that the confraternity of the healing art should be undivided. He then gave an outline of the early history and progressive development of the British Medical Association, after which he proceeded to review recent advances made in medical knowledge, with special reference to Pawlow's investigations on the process of digestion, and the views expressed by Professor Chittenden of Yale University in his treatise on "Physiological Economy in Nutrition." He pointed out that the question of nutrition concerned all mankind, and said that when the teachings of physiological laboratories and college halls became common property there would be more plain living and high thinking, as well as less repining on the part of the masses, who were now aggrieved on account of their enforced moderation. It was the prerogative of the medical profession to show that nature's laws, rightly interpreted and adopted, were the only safe rule of life, and that much of the money spent on patent foods and so-called patent medicines was misspent. An ample supply of clean pure milk was a very great boon to a community, and service in keeping this question before the public had been done by the paediatric societies in the United States. The marked increase in the debt which medicine owes to physiology and physiological chemistry was acknowledged, and attention was called to the increasing recognition of the value of preventive medicine.

The meeting, the first general meeting of the Association, was then adjourned until the evening, when Dr. W. S. A. Griffith delivered the Address in Obstetrics.[1]

In the afternoon of Tuesday a huge reception was held at Government House by the Lieutenant-Governor of Ontario, who had issued upwards of a thousand invitations. On the same afternoon Professor Goldwin Smith, the famous and veteran historian and scholar, who resigned his professorship of history at Oxford 40 years ago and who for the past 35 years has resided in Toronto, gave a small reception at Toronto Grange to some of the best-known members of the Association. In the evening of the same day the President gave a large garden party in the quadrangle of University College. This form of reception was a novelty and a particularly happy idea, for Toronto was enjoying a spell of very hot weather when the meeting began, and it was inexpressibly pleasant to be able to congregate in the grateful cool of the evening air. An important dinner was also given by Dr. H. A. Bruce on the same evening.

The principal event of Wednesday, apart from the Address in Medicine by Sir James Barr[2] and the Address in Surgery by Sir Victor Horsley,[3] was the luncheon given by the Ontario branch of the Dominion Temperance Alliance to Sir Victor Horsley, Professor Sims Woodhead, and other prominent supporters of teetotal principles. 500 persons sat down to luncheon in the University Gymnasium. The temperance feeling is very strong in Canada and Sir Victor Horsley's assertion that the medical profession at home displayed the same hostile attitude towards alcohol as was shown by the guests of the Temperance Alliance was received with applause, though the statement would hardly have received the endorsement of the British Medical Association. Professor Sims Woodhead, who spoke in sequence to Sir Victor Horsley, appealed to the younger medical men to study the question for themselves, adding that all laboratory work went to show that the use of alcohol interfered with the condition of immunity.

A storm burst over the city on Wednesday afternoon and somewhat marred the reception given to members of the Association at the Toronto General Hospital by the trustees of the hospital. The rain unfortunately compelled the holding of the reception indoors; but some 350 guests made a visit of inspection to the wards. The cupola of the Grace Hospital was struck during the storm.

The annual dinner of the Association was held on Thursday night in the Victoria Rink, Huron-street, under the chairmanship of the President, Dr. Reeve, who was supported by the Lieutenant-Governor of the Province and Professor Goldwin Smith. Some 450 members of the Association and guests were present. In reply to the toast of "The King" the Lieutenant-Governor referred with warmth to the inexcusable ignorance which he said prevailed in Great Britain as to Canadian affairs. The toast of "The British Medical Association" was proposed by Professor Goldwin Smith in eloquent terms, his allusion to the service done to the world by the medical profession in the prevention of empirical murder being received with loud applause. The toast was acknowledged by Sir William Broadbent, other speakers being Sir James Grant, M.D., K.C.M.G., Mr. E. B. Osler, M.P. (elder brother of Professor William Osler of Oxford), Sir William Hingston (the eldest member of the British Medical Association in Canada), Professor Aschoff of Marburg, Dr. Lapicque of Paris, Dr. Mayo of Rochester, Minnesota, Dr. F. W. Mott, and Sir Victor Horsley.

[1] THE LANCET, August 25th, p. 490.
[2] THE LANCET, August 25th, p. 479.
[3] THE LANCET, August 25th, p. 484.

On the same day a luncheon was given by the Empire Club in the clubhouse of the Royal Canadian Yacht Club on Toronto Island. The weather, in spite of a recurrence of thunderstorms, was bright and clear. Some very interesting speeches were made, the note of one and all being that the links binding Canada to the mother country are very real, and that it is the duty of all good citizens of the Empire to keep that chain intact by losing no opportunities of mutual comprehension and sympathy.

On the same afternoon the honorary degree of LL.D. of the University of Toronto was conferred upon 14 distinguished members of the Association[4] and visitors. The Dean of the Faculty of Medicine, Dr. Reeve, in presenting the recipients of the honour to Dr. Maurice Hutton, acting-President of the University, referred to the position and attainments of those present, and of Dr. Langley Browne, chairman of the Council of the British Medical Association, who received the degree *in absentiâ*. Speeches in reply were made by Sir William Broadbent on behalf of the British physicians honoured, by Mr. Franklin on behalf of the British surgeons, by Professor W. D. Halliburton on behalf of British physiologists, and by Dr. Lapicque on behalf of the French, German, and American recipients of the degree. It was further announced by Professor William Gardner of Montreal that at the next Convocation of McGill University, Montreal, the honorary degree of LL.D. would be conferred *in absentiâ* upon Sir Thomas Barlow, Sir William Broadbent, Professor Clifford Allbutt, and Sir Victor Horsley.

The annual pathological museum was held in the first floor rooms of the medical laboratories, in the same building as the pathological museum of the University of Toronto. The exhibits were of exceptional interest and included a series of specimens illustrating Dr. Klotz's paper on Experimental Arterio-Sclerosis, a series of specimens of congenital disease of the heart, and a series of photographs illustrating the facies of disease. One of the most interesting exhibits was that of Dr. W. H. Watters, of Boston University, Massachusetts, which comprised about 600 pathological specimens illustrating a gelatin method of mounting museum specimens. The preparations are first made by Kaiserling's method and afterwards placed in a solution of gelatin, glycerine, and potassium acetate, to which a little formalin is added. The specimen is put in place while the gelatin is liquid, and it is then allowed to solidify. This method preserves the colour better than the ordinary method of mounting in glycerine, while the specimen need not be kept away from the light. The gelatin remains clear and is prevented from melting, even in hot weather, by the formalin. This method has been in use for about five years and has given satisfactory results as regards permanency. Judged by the specimens shown it is an eminently satisfactory method. There were also a skiagraphic exhibit and a number of plaster casts of orthopædic conditions.

The annual exhibition was held in two large rooms and several smaller ones on the first floor of the main building of the University of Toronto, which is a handsome Norman Gothic building, beautifully situated in the university park behind the university buildings. It was therefore very conveniently situated for the members and visitors, being in the same building as the offices, registration rooms, and several of the sections. The rooms were decorated by a series of paintings and photographs illustrating scenes in Canadian life. Although there was a fairly large number of exhibits, with a few exceptions there were none of especial interest or novelty. The usual prominent British firms were represented, and there was an unusually large number of American exhibitors, as might have been expected, but of actual Canadian firms there were but few. Hospital furniture, operation tables, instruments, and special foods were much displayed, but the electrical exhibits and mechanical apparatus were among the most interesting exhibits. There were comparatively few new pharmaceutical preparations exhibited.

[4] THE LANCET, Sept. 1st, 1906, p. 625.

We should like to take the earliest opportunity of expressing our thanks to the many officers of the British Medical Association and residents in Toronto who have given us assistance and welcome.

OPENING OF THE LONDON MEDICAL SCHOOLS.

WINTER SESSION, 1906–07.

St. Bartholomew's Hospital.—The session will be opened on Oct. 1st by a dinner of old students in the great hall of the hospital.

Charing Cross Hospital.—The winter session will commence on Oct. 1st by the delivery of the sixth biennial Huxley lecture on Recent Advances in Science and their Bearing on Medicine and Surgery, in the anatomical theatre of the medical school at 4 P.M., by Professor Ivan Petrovitsch Pawlow of St. Petersburg. The dinner of the past and present students will take place on the evening of the same day.

St. George's Hospital.—The session will begin on Oct. 1st. The inaugural address will be delivered and the prizes presented by the Right Reverend the Bishop of Bristol on the same afternoon at 3 P.M. The annual dinner will be held in the evening at 6 30 for 7 at the Whitehall Rooms, Hôtel Métropole, Mr. Clinton T. Dent, senior surgeon to the hospital, being in the chair.

Guy's Hospital.—The session will commence on Oct. 1st and the opening meeting of the Pupils' Physical Society will be held on Oct. 13th at 8 P.M., when an address will be delivered by Professor T. Clifford Allbutt.

King's College Hospital.—The session will open on Oct. 2nd with an introductory lecture by Mr. Pridgin Teale, F.R.S. The old students' dinner will be held at the Hotel Cecil on the evening of the same day when Dr. Nestor Tirard will preside.

London Hospital.—The Winter Session will commence on Oct. 1st. The annual dinner will take place the same evening at 7.30 at Princes Restaurant; Mr. John Holroyde of Rochester will be in the chair. In the afternoon of the same day members of the staff will be at home in the library of the College to receive old students and to show them the recent additions and improvements to the hospital and College.

St. Mary's Hospital.—The Winter Session will open on Monday, Oct. 1st, with an Introductory Address by Dr. N. H. Alcock, lecturer on physiology and vice-dean of the Medical School. The annual dinner of past and present students will be held at the Whitehall Rooms, Hôtel Métropole, on Tuesday, Oct. 2nd, at 7 P.M., with Dr. M. Handfield-Jones in the chair.

Middlesex Hospital.—The session will open on Oct. 1st, when Dr. H. Campbell Thomson will deliver the inaugural address. The students' dinner will be held at the Trocadéro Restaurant on the same evening.

St. Thomas's Hospital.—The session will commence on Oct. 1st. On the same evening the old students' dinner will be held at the Hotel Cecil.

University College Hospital.—The session will be opened on Oct. 2nd at 4 P.M. by Professor R. J. Godlee, who will deliver the inaugural address on the Past, Present, and Future of the Medical School. The annual dinner will be held on the same day at 7 P.M. at the Hotel Cecil. Professor G. D. Thane will preside.

Westminster Hospital.—The session will begin on Oct. 1st. The annual dinner will take place on the opening day at the Trocadéro, Dr. F. de Havilland Hall, being in the

chair. The secretary of the dinner is Mr. E. Rock Carling, 39, New Cavendish-street, W.

London (Royal Free Hospital) School of Medicine for Women.—The session will begin on Oct. 1st when Professor J. W. Byers will deliver an inaugural address on Medical Women and Public Health Problems at 4 P.M.

London School of Tropical Medicine.—The session will commence on Oct. 1st. The inaugural address will be delivered on Oct. 8th by Colonel Kenneth Macleod, I.M.S., when the Duke of Marlborough will occupy the chair.

MEDICINE AND THE LAW.

Medical Men and a Begging Letter Impostor.

Bruno Kohnfeldt is a German "described as a doctor," who apparently possesses enough education to be useful to him in a career of fraud without enabling him to make an honest living, for, according to his own evidence and that of the police, he has been since his release on ticket-of-leave in a very weak state due to starvation. He has, genuinely no doubt, tried to make money by journalism but has also written a large number of begging letters, in at least one of which he represented himself as a medical man, although he gave an address at which no surgery exists and no medical man resides. This letter was addressed to Bishop Kelly, late Bishop of Moray, and was couched in specious terms, recommending as an object of charity an imaginary patient stated to be an old university man in distressed circumstances. Medical men, who are especially liable to be the victims of impostors of this class are reminded that their own names and addresses, with the particulars of their educational careers, are open to the inspection of all who choose to make use of the numerous free libraries now in existence, and also that the claims made by honest but unfortunate people are rarely of so urgent a nature as to leave no time for inquiry and verification. Kohnfeldt has been sent to prison for nine months, in addition to which, we believe, he will have to serve the balance of his term of penal servitude, and he has expressed a wish, which we hope may be granted, to be deported eventually to his own country.

Child Insurance and Child Murder.

A very bad case of child insurance followed by cruel neglect of the assured, was brought to light recently at the Willesden police court. The persons charged were a man and woman living together in a house which was described by an inspector of the National Society for the Prevention of Cruelty to Children as clean, while the same witness deposed that the children were well cared for. The subject of the prosecution was the child of the male prisoner. He was a little boy, five years of age. He was filthy, ill clad, and emaciated, he was allowed to sleep where he could, and was so weak that he could hardly stand. An insurance agent gave evidence that he had been insured since May, 1905, at a halfpenny a week at first but later at a penny, and that on his death a sum of £5 would have been received by those whose duty it was to feed and maintain him. Naturally in such a case the most important evidence was that of a medical witness. Mr. Walter E Turner, medical officer at the Willesden Union Infirmary, described the condition of the little boy upon admission there, when he weighed 16 pounds, and explained to the bench that the normal weight of a child of his age would have been about 40 pounds. He had no organic disease and in the infirmary took food well, gaining 5 pounds in the first week and 11½ pounds during the interval between his admission and the date of the hearing of the charge. Mr. Turner was of opinion that the starvation had gone on for months, and that in a fortnight or three weeks it must have had its natural result in the child's death. The magistrate, Mr. George Wright, sentenced both prisoners to six months' hard labour. Those who feel satisfaction at this result and who, perhaps, regret that it was not possible to inflict a more severe punishment, will, no doubt, wish that child insurance, which may form a useful and praiseworthy provision against emergencies on the part of poor parents, should be so controlled as not to constitute a source of temptation to the cruel and covetous. It should not be impossible to render compulsory a system of inspection, to be established at the expense of the insurance companies, and to be applied in all cases where the lives of children are insured. The companies could hardly complain as the result of such inspection would be to diminish the number of unjustifiable claims made against them. The argument that it would diminish the number of insured children on their books would hardly be considered in their favour.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In 76 of the largest English towns 8784 births and 5592 deaths were registered during the week ending August 25th. The annual rate of mortality in these towns, which had steadily increased in the six preceding weeks from 11·7 to 17·0 per 1000, further rose to 18·4 during the week under notice. During the first eight weeks of the current quarter the death-rate in these towns averaged 14·1 per 1000, the rate during the same period in London being 14·0. The lowest death-rates in the 76 towns for the week were 8·1 in Smethwick, 8·4 in Southampton, 8·6 in King's Norton, and 9·2 in Reading; the rates in the other towns ranged upwards to 24·2 in Liverpool, 24·9 in Birkenhead, 25·9 in Coventry, 28·3 in Stockport, 29·2 in Wigan, and 29·7 in Yarmouth. The 5592 deaths in the 76 towns showed a further increase of 435 upon the numbers returned in recent weeks, and included 1876 which were referred to the principal epidemic diseases, against numbers increasing from 361 to 1623 in the six preceding weeks; of these no fewer than 1651 resulted from diarrhœa, 73 from measles, 53 from whooping-cough, 49 from diphtheria, 25 from scarlet fever, 25 from "fever" (principally enteric), and not one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 6·2 per 1000 in the 76 towns and to 5·6 in London. No death from any of these epidemic diseases was registered during the week under notice in Handsworth, and the annual death-rate therefrom, was under 1 per 1000 in Bournemouth, Reading, and King's Norton; whereas they caused rates equal to 11·4 in Aston Manor, 11·5 in Birmingham, 13·3 in Birkenhead, 13·8 in West Ham, and 15·7 in Stockport. The deaths (mainly of infants under one year) referred to diarrhœa, which had steadily increased in the 11 preceding weeks from 50 to 1385, further rose in the week to 1651; the highest annual rates from this disease being 10·8 in Birmingham, 10·9 in Nottingham, 11·4 in West Ham, 12·4 in Birkenhead, and 13·6 in Stockport. The largest proportional fatality from measles occurred in South Shields, Stockport, Norwich, and Rotherham; and from whooping-cough in Walsall and Rotherham. Of the 49 deaths from diphtheria nine occurred in London, four in West Ham, and two each in Derby, Liverpool, Manchester, Halifax, Bradford, Hull, Middlesbrough, and Newcastle-upon-Tyne. Scarlet fever caused nine deaths in London, two in Liverpool, two in Bradford, and two in Middlesbrough. Three deaths were referred to "fever" in West Ham and two in Hull. No case of small-pox was under treatment in the Metropolitan Asylums hospitals during the week, no case having been admitted since the end of June. The number of scarlet fever cases under treatment in the Metropolitan Asylums hospitals and in the London Fever Hospital, which had been 3051 and 3046 at the end of the two preceding weeks, rose in the week under notice to 3078; 350 new cases were admitted to these hospitals during the week, against 415, 308, and 317 in the three preceding weeks. The deaths referred to pneumonia and other diseases of the respiratory organs in London, which had steadily increased in the four preceding weeks from 101 to 119, declined again to 103, and were 17 below the corrected average in the corresponding week of the four preceding years, 1902–05. The causes of 47, or 0·8 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner. All but one of the causes of death were duly certified in London, and all were so certified in Bristol, Leeds, Leicester, Hull, Salford, and in 48 other of the large towns; the proportion of uncertified causes of death showed, however, a considerable excess in Liverpool, Sheffield, and Preston.

In 76 of the largest English towns 8663 births and 5556 deaths were registered during the week ending Sept. 1st. The annual rate of mortality in these towns, which had steadily increased in the seven preceding weeks from 11·7 to 18·4 per 1000, slightly declined to 18·3 during the week

under notice. During the first nine weeks of the current quarter the death-rate in these towns averaged 14·5 per 1000, the rate during the same period in London being 14·4. The lowest death-rates in the 76 towns during the week were 7·2 in Northampton, 9·2 in Bournemouth, 10·1 in Hastings, and 10·2 in Hornsey; the rates in the other towns ranged upwards to 25·8 in Hull, 25·9 in Coventry, 28·7 in Yarmouth, and 30·4 in Stockport. The 5556 deaths in the 76 towns showed a decline of 36 from the high number in the previous week, and included 1977 which were referred to the principal epidemic diseases, against numbers increasing from 361 to 1875 in the seven preceding weeks; of these no fewer than 1765 resulted from diarrhœa, 64 from measles, 55 from whooping-cough, 37 from diphtheria, 34 from scarlet fever, 26 from "fever" (principally enteric), and not one from small-pox. The deaths from these epidemic diseases were equal to an annual rate of 6·5 per 1000 in the 76 towns and to 5·6 in London. The annual rate from these epidemic diseases during the week ranged from 0·5 per 1000 in Halifax, 0·7 in Devonport, and 0·8 in Bournemouth, to 12·0 in Stockport and in Aston Manor, 12·3 in Coventry, and 12·7 in Salford. The deaths referred to diarrhœa (mainly of infants under one year), which had steadily increased in the 12 preceding weeks from 50 to 1649, further rose during the week to 1765; the highest annual rates from this disease during the week were 9·6 in Nottingham, 9·8 in Grimsby, 9·9 in West Ham, 11·4 in Aston Manor and in Salford, and 12·3 in Coventry. The largest proportional mortality from measles occurred in Wigan, Rotherham, and Stockport; and from whooping-cough in Huddersfield, Birkenhead, and Merthyr Tydfil. Scarlet fever caused seven deaths in London, six in Sheffield, three in Liverpool, and two in Swansea; and diphtheria 11 in London, and two each in St. Helens, Wigan, and Rochdale. Three deaths were referred to "fever" in West Ham. No case of small-pox was under treatment in the Metropolitan Asylums hospitals during the week and no case has been admitted thereto since the end of June. The number of scarlet fever cases under treatment in the Metropolitan Asylums hospitals and in the London Fever hospital, which had been 3046 and 3078 at the end of the two preceding weeks, declined in the week under notice to 3042; 317 new cases were admitted to these hospitals during the week, against 317 and 350 in the two preceding weeks. The deaths referred to pneumonia and other diseases of the respiratory organs in London which had been 119 and 103 in the two previous weeks, rose again during the week to 109, but were 19 below the corrected average in the corresponding week of the four preceding years 1902-05. The causes of 57, or 1·0 per cent., of the deaths registered in the 76 towns during the week were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Bristol, Salford, Leicester, Nottingham, and in 45 of the large towns; the proportion of uncertified causes showed, however, a considerable excess in Liverpool, St. Helens, Rochdale, Preston, Sunderland, and Gateshead.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 11·8, 14·0, and 14·8 per 1000 in the three preceding weeks, declined again to 13·8 in the week ending August 25th and was 4·6 below the mean rate in the same week in the 76 English towns. The rates in the eight Scotch towns ranged from 10·6 and 11·4 in Perth and Leith to 16·2 and 16·5 in Aberdeen. The 472 deaths in the eight towns showed a decline of 20 from the number returned in the previous week, and included 79 which resulted from the principal epidemic diseases, against 64 and 61 in the two previous weeks; these 79 deaths were equal to an annual rate of 2·3 per 1000, which was no less than 3·9 below the rate from the same diseases in the 76 English towns. Of these 79 deaths, 54 were referred to diarrhœa, 11 to whooping-cough, six to "fever," four to diphtheria, three to measles, one to scarlet fever, and not one to small-pox. The deaths attributed to diarrhœa in the Scotch towns, which had steadily increased in the five preceding weeks from 11 to 37, further rose last week to 54, of which 30 occurred in Glasgow, six in Edinburgh, and five in Greenock. Nine fatal cases of whooping-cough, five of "fever" (including four certified as cerebro-spinal meningitis), three of diphtheria, and two of measles were also returned in Glasgow. The mortality from epidemic disease, other than diarrhœa, was exceptionally low in the other Scotch towns. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 68 in each of the two preceding weeks, declined in the week under notice to 52, but exceeded by eight the low number returned in the corresponding week of last year. The causes of 21, or 4·0 per cent., of the deaths registered during the week were not certified; the proportion of uncertified causes of death in the English towns did not exceed 0·8 per cent.

The annual rate of mortality in eight of the principal Scotch towns, which had been equal to 14·8 and 13·8 per 1000 in the two preceding weeks, rose again to 14·2 in the week ending Sept. 1st, and was 4·1 below the mean rate in the same week in the 76 English towns. The rates in the eight Scotch towns ranged from 11·4 and 11·5 in Paisley and Edinburgh to 19·6 in Perth and 22·9 in Greenock. The 487 deaths in the eight towns showed an increase of 15 upon the number returned in the previous week, and included 80 which were referred to the principal epidemic diseases, against 61 and 79 in the two previous weeks; these 80 deaths were equal to an annual rate of 2·3 per 1000, which was no less than 4·2 below the rate from the same diseases in the 76 English towns. Of these 80 deaths 48 resulted from diarrhœa, 11 from whooping-cough, 10 from "fever," five from diphtheria, three from measles, two from scarlet fever, and one from chicken-pox. The deaths attributed to diarrhœa in the Scotch towns, which had steadily increased in the six preceding weeks from 11 to 54, declined last week to 48, of which 28 occurred in Glasgow, six in Dundee, four in Edinburgh, and three both in Paisley and Greenock. Eight of the 11 fatal cases of whooping-cough were returned in Glasgow and two in Aberdeen; nine of the ten deaths referred to "fever" (including four certified as cerebro-spinal meningitis) were also returned in Glasgow. Three fatal cases of diphtheria were recorded in Edinburgh and two in Glasgow. The deaths in the eight towns referred to diseases of the respiratory organs, including pneumonia, which had been 68 and 52 in the two preceding weeks, rose again to 61 in the week under notice, and exceeded by eight the low number returned in the corresponding week of last year. The causes of 17, or 3·5 per cent., of the deaths registered during the week were not certified; the mean proportion of uncertified deaths in the 76 English towns did not exceed 1·0 per cent.

HEALTH OF DUBLIN.

The annual death-rate in Dublin, which had been equal to 16·8, 17·3, and 19·7 in the three preceding weeks, further rose to 21·5 during the week ending August 25th. During the first eight weeks of the current quarter the death-rate in the city averaged 19·0 per 1000, the mean death-rates during the same period being 14·0 in London and 12·8 in Edinburgh. The 156 deaths of Dublin residents during the week under notice showed a further increase of 13 upon the numbers returned in the three preceding weeks, and included 27 which were referred to the principal epidemic diseases, against 19 and 32 in the two previous weeks; these 27 deaths were equal to an annual rate of 3·7 per 1000, the death-rate in the week from the same diseases being 5·6 in London and 1·2 in Edinburgh. All these 27 deaths were referred to diarrhœa (against 10 and 29 in the two previous weeks), no fatal case of small-pox, scarlet fever, measles, diphtheria, whooping-cough, or "fever" having been registered in the city during the week. The deaths of infants showed a marked increase during the week, while those of elderly persons were below the average. Six inquest cases and eight deaths from violence were registered; and 48, or 30·8 per cent., of the deaths occurred in public institutions. The causes of all but two of the deaths registered during the week were duly certified.

The annual death-rate in Dublin, which had steadily increased from 16·8 to 21·5 per 1000 in the four preceding weeks, further rose to 21·9 during the week ending Sept. 1st. During the first nine weeks of the current quarter the death-rate in the city averaged 19·3 per 1000, the mean death-rates during the same period being 14·4 in London and 12·6 in Edinburgh. The 159 deaths of Dublin residents during the week under notice showed a further increase of three upon the numbers returned in the four preceding weeks, and

included 28 which were referred to the principal epidemic diseases, against 32 and 27 in the two previous weeks; these 28 deaths were equal to an annual rate of 3·9 per 1000, the death-rate in the week from the same diseases being 5·6 in London and 1·4 in Edinburgh. Of these 28 deaths, 27 were referred to diarrhœa (against 29 and 27 in the two previous weeks), one to "fever," and not one to small-pox, measles, scarlet fever, diphtheria, or whooping-cough. The deaths of infants showed a decline from the high number in the previous week, and those of elderly persons were below the average. Eight inquest cases and seven deaths from violence were registered; and 50, or 37·7 per cent., of the deaths occurred in public institutions. The causes of all but one of the deaths registered during the week were duly certified.

THE SERVICES.

ROYAL NAVY MEDICAL SERVICE.

THE following appointments are notified:—Fleet Surgeons: F. A. Brice to the *Excellent*, for the *Revenge*, on recommissioning; J. McElwee to the *Britannia*, on commissioning; F. Fedarb to the *Dreadnought*, on commissioning; and E. C. Lomas to the *President*, for three months' study at Edinburgh University. Staff Surgeons: R. Waterfield to the *Excellent*, for the *Revenge*, on recommissioning; W. H. Thomson to the *President*, for three months' course at West London Hospital; H. H. Pearse to the *Minerva* and R. T. Gilmour to the *Talbot*, on recommissioning; J. C. Watt to the *Pelorus* and E. F. Mortimer to the *Sirius*, on recommissioning. Surgeons: J. Bourdas to the *Impregnable*, for dental duties; H. L. Norris to the *Sappho*; E. S. Tuck to the *Scylla* on recommissioning; W. F. Keir to the *Vernon*, for the *Furious*; H. Woods to the *Minerva*, on recommissioning; and P. D. MacJ. Campbell, to the *Scalark*.

ROYAL ARMY MEDICAL CORPS.

The undermentioned Lieutenant-Colonels retire on retired pay (dated August 25th, 1906):—William H. Pinches, Michael J. Whitty, and Willington S. Dowman. Lieutenant George De la Cour from the Seconded List to be Lieutenant (dated August 1st, 1906). The undermentioned Lieutenants to be Captains (dated July 31st, 1906): John G. Bell, Maurice G. Winder, Frederick W. W. Dawson, Joseph E. H. Gatt, Robert M. Ranking, Thomas S. Coates, Albert E. B. Wood, James C. G. Carmichael, Roland H. Bridges, James A. W. Webster, Francis C. Lambert, James B. Meldon, Reginald C. Wilmot, Charles W. Holden, Harry B. Kelly, Edward M. Pennefather, George H. J. Brown, Benjamin H. V. Dunbar, David Ahern, Donald G. Carmichael, John M. M. Crawford, Charles Bramhall, Thomas E. Harty, Henry H. Swanzy, John H. Duguid, Henry T. Stack, Burnet G. Patch, and Geoffrey W. G. Hughes. The undermentioned Lieutenants are seconded under the provisions of Article 349 Royal Warrant, March 19th, 1906 (dated July 30th, 1906):—Benjamin Johnson, and William E. C. Lunn. The undermentioned gentlemen to be Lieutenants on probation (dated July 30th, 1906):—Gerald Hoey Stevenson, John Heatly Spencer, William Henry Forsyth, Alfred Herbert Heslop, Archibald Craig Amy, Wright Mitchell, James Archibald Bruce Sim, Edward John Elliot, Ernest Browning Lathbury, Edward Gibbon, Cecil Scaife, Robert Walter Dixon Leslie, Ernest Duncan Caddell, Michael Joseph Lochrin, Daniel Maurice Corbett, Benjamin Johnson, William Ernest Craven Lunn, John Rowland Foster, Arthur Hildebrand Jacob, Arthur Morris Benett, Francis Lyndon Bradish, George Philip Alexander Bracken, Owen Cunninghame Preston Cooke, William Wallace Boyce, Carlisle Kelly, Clarence Hamul Denyer, Whiteford John Edward Bell, Duncan Coutts, William Francis Mary Loughnan, Dennis Thomas MacCarthy, Hector Lionel Howell, Charles William Bowle, John Joseph O'Keeffe, James Alexander Bennett, Thomas Walker Browne, William Irwin Thompson, Reginald Charles Galgey, Edward James Kavanagh, and Ernest Cyril Phelan.—Major G. B. Stanistreet has been appointed Staff Officer to the Principal Medical Officer of the Southern Command. Colonel E. North has been appointed Administrative Medical Officer in Dublin. Captain E. W. W. Cochrane has been selected to succeed Lieutenant-Colonel H. C. B. Elkington as sanitary officer to the Aldershot Army Corps. Captain S. A. Archer, on duty in Dublin, has been selected for Specialist in Ophthalmology in Ireland. Major C. R. Elliott, Fermoy, has been approved for appointment as a sanitary officer in the Irish command, with specialist pay, vice Lieutenant-Colonel R. L. R. Macleod, Dublin, who leaves for India in October. Lieutenant-Colonel R. W. Ford, D.S.O., has joined the London district for duty. Major J. Thomson has assumed medical charge of Military Families Hospital at Woolwich, vice Lieutenant-Colonel R. J. C. Cottell. Major G. St. C. Thom, having been ordered for service in India, has been succeeded as Adjutant of the Depôt and Training School, Royal Army Medical Corps, at Aldershot, by Captain E. T. F. Birrell from the Royal Army Medical College. Colonel P. M. Ellis has been appointed Administrative Medical Officer in India.

INDIAN MEDICAL SERVICE.

Lieutenant-Colonel J. Carmichael, R.A.M.C., has been appointed to the command of the Station Hospital, Jullundur.

ARMY MEDICAL RESERVE OF OFFICERS.

Surgeon-Lieutenant James N. Macmullan to be Surgeon-Captain (dated August 14th, 1906).

VOLUNTEER CORPS.

Rifle: 1st Volunteer Battalion, the Queen's (Royal West Surrey Regiment): Walter Gray Paget to be Surgeon-Lieutenant (dated August 25th, 1906). 4th Volunteer Battalion, the South Wales Borderers: Surgeon-Lieutenant W. P. Miles resigns his commission (dated August 25th, 1906). 1st Lanarkshire Volunteer Rifle Corps: Surgeon-Lieutenant R. H. Henderson to be Surgeon-Captain (dated August 25th, 1906). 3rd (the Blythswood) Volunteer Battalion, the Highland Light Infantry: Surgeon-Lieutenant P. M. Dewar to be Surgeon-Captain (dated August 25th, 1906). 24th Middlesex Volunteer Rifle Corps: Wyndham Anstruther Milligan to be Surgeon-Lieutenant (dated August 4th, 1906). 4th Volunteer Battalion, the Royal Fusiliers (City of London Regiment): John Kilpatrick Brownlees to be Surgeon-Lieutenant (dated August 29th, 1906).

ROYAL HOSPITAL, CHELSEA.

Lieutenant-Colonel Reginald J. C. Cottell has been appointed Deputy-Surgeon of the Royal Hospital, Chelsea, vice Lieutenant-Colonel R. W. Ford, D.S.O., whose tenure of that appointment has expired (dated August 17th, 1906).

DEATHS IN THE SERVICES.

Surgeon Herbert Bartlett Simpson, R.N., of the *Scalark*, on August 28th, at Diyatalawa, Ceylon (naval camp), in his twenty-ninth year. He was appointed surgeon in November, 1902.

OUTBREAK OF ENTERIC FEVER AT FLEETWOOD CAMP.

The serious outbreak of enteric fever in the officers' mess of the Militia battalion of the Loyal North Lancashire Regiment at Fleetwood calls for a searching investigation, which, indeed, it is bound to have. The outbreak in question, which is reported to have caused the death of three officers, was of an explosive nature and apparently circumscribed within very narrow limits. It was so strongly indicative of some common cause, and that of a concentrated kind, as to suggest at once water poisoning, and this very naturally appears to have been the direction of the inquiries that have so far been instituted. The training camp is the property of the Crown and at a little distance from the town. The outbreak of enteric fever was limited to the officers' mess, and the food is believed to have been altogether beyond suspicion. The water supplied to the camp is the same as that supplied to the town of Fleetwood and all neighbouring places, and Fleetwood's bill of health is quite clear. But all the dates and facts connected with the medical history of the occurrence, and the results of the bacteriological and other investigations, have still to be obtained.

RIFLE TEACHING AT SCHOOL.

We are glad to notice that the school rifle movement is being widely followed. The training of the hand and eye is useful and interesting to boys, and its beneficial effect will probably be seen in such other pursuits and occupations as they take up in the course of their lives. There are reasons also of a disciplinary and hygienic kind why a course of rifle shooting and elementary military drill should prove useful.

The Volunteer Officers' Decoration has been conferred on the under-mentioned medical officers:—Northern Command

(Rifle): 1st Volunteer Battalion the Northumberland Fusiliers, Surgeon-Major and Honorary Surgeon-Lieutenant-Colonel Duncan Stewart. Eastern Command (Artillery): 1st Cinque Ports Royal Garrison Artillery (Volunteers), Surgeon-Major James William Thornton Gilbert.

In view of the approaching despatch of a draft of Royal Artillery to India, an order was recently issued at Woolwich that officers should ascertain the names of men, women, and children willing to be inoculated against enteric fever. Notwithstanding Lord Kitchener's recent remarks on the subject at Simla, the only volunteer was one man of the veterinary department.

The War Office has under experiment a number of ruck sacks—a bag of the Austrian type—which have been submitted to certain committees as a suitable method for the soldier to carry his belongings on service, as well as to replace the valise, which is now practically abolished in the British army.

The finger-print system is to be adopted in the United States Army as a means of identification of soldiers.

Correspondence.

"Audi alteram partem."

ON THE CORRECTION OF DEATH-RATES.

To the Editors of THE LANCET.

SIRS,—In Dr. T. F. Pearse's article on the "Correction of Death-rates," assuming the accuracy of his arithmetical calculations, he correctly sums up their result when he points out that the death-rate in Calcutta in 1904, calculated at the age and sex rates of mortality prevailing generally in Bengal, would be equal to 36·6 per 1000, whereas the death-rate of the Bengal population calculated at the age and sex rates of mortality prevailing in Calcutta would be equal to 38·7 per 1000. It is, however, impossible to agree with Dr. Pearse when he asserts that the difference between these two corrected rates proves the insufficiency of the method adopted by the Registrar-General for the correction of the crude recorded death-rate in a town or district for abnormality of the age and sex constitution of the population. It is obvious that in the case dealt with the Registrar-General's method shows what the death-rate in the Calcutta population in 1904 would have been if the sex and age rates of mortality had been the same as those that prevailed in the standard population of Bengal. The alternative method, on the other hand, shows what the death-rate in the Bengal population would have been in 1904 if the sex- and age-rates of mortality had been the same as those that prevailed in the population of Calcutta. Could Dr. Pearse have expected that these two entirely distinct calculations would have yielded identical results? As a matter of fact, this alternative method is adopted by the Registrar-General in his Decennial Supplement, but could not be used for his Annual Summary. Incidentally, the startling excess of the female rates of mortality recorded in Calcutta in 1904, shown in Dr. Pearse's Table A, suggests the probability either of a considerable under-statement of the female population of that city at the census in 1901, or of its rapid increase between 1901 and 1904, or of some other error in the recorded facts, since the Bengal female death-rates, given in his Table B, are considerably below the male death-rates, as is almost invariably the case in all trustworthy mortality statistics.

I am, Sirs, yours faithfully,

Surbiton, August 27th, 1906. NOEL A. HUMPHREYS.

To the Editors of THE LANCET.

SIRS,—The method of calculating corrected death-rates described by Dr. T. F. Pearse in THE LANCET of August 25th, 1906, p. 500, is practically the same as that given by Dr. T. W. Hime in his "Practical Guide to the Public Health Acts," second edition, 1901, pp. 544–548. Dr. Hime in a foot-note observes that his results for Bradford differ very materially from those of the Registrar-General (23·38 as against 21·31 for males) and that the results of the latter are "wrong." In the case of Bradford, therefore, not a very abnormally constituted population, as in the case of Calcutta, the application of this method leads to a corrected death-rate considerably higher than that obtained by the Registrar-General's method. There are, as Dr. Pearse notes, two methods of making the required correction. The Registrar-General applies the mortality-rates adopted as a standard to the various age and sex groups of the population under consideration; while the other method applies the mortality-rates obtaining in the population in question to a standard population. The latter is the method preferred by Dr. Pearse and by Dr. Hime. Its use is negatived in very many instances by the fact that mortality rates in sufficient detail are not obtainable for the populations under consideration, whereas the age and sex constitution of all important populations is to be found in the census reports.

Dr. Hime, in his application of method No. 2, adopts as his standard population a "standard million," constituted as was the population of England and Wales at the preceding census; Dr. Pearse uses a "miniature population" of 847,796, the census population of Calcutta, constituted as was that of Bengal at the preceding census. The result obtained would have been exactly the same in each case had the total census populations of England and Wales and of Bengal respectively been utilised. If this had been done in the case of Calcutta, for instance, the various age-and-sex group populations in Table D of Dr. Pearse's article would have been increased in equal proportion (847,796 : 70,000,000, or, population of Calcutta : population of Bengal) and the calculated deaths in the same table would have been increased in the same proportion. Consequently the calculated death-rate obtained would not have been affected. The same thing may be shown in the same way for Dr. Hime's method, whence the practical identity of the two is obvious.

If, then, apart from mere variations in detail of application there are two principal methods by which corrected death-rates may be calculated, both apparently at first sight satisfactory in principle but yielding discrepant results, an important question arises as to which is to be preferred and why? This matter is, however, beyond the scope of the present letter and, as pointed out above, practical considerations will generally restrict the statistician to the method of the Registrar-General.

I am, Sirs, yours faithfully,

August 31st, 1906. T. H. C. STEVENSON.

THE ROYAL BERKSHIRE HOSPITAL.

To the Editors of THE LANCET.

SIRS,—Some few years ago I was appointed physician to the Royal Berkshire Hospital under the following rule: "No person shall be eligible for the office of physician to the hospital unless he be a medical graduate of one of the universities of Great Britain or Ireland and his name entered on the Medical Register; neither shall any person be eligible who practises or is connected in partnership with anyone practising surgery, pharmacy, or midwifery." Recently this rule was altered to the extent that the practice of midwifery was to be allowed if desired. At the same time it was decided that two assistant physicians should be elected who were to have beds allotted to them and to have charge of the out-patient department and a physician was to be elected to form a skin department. This matter was never brought before the staff as a whole, neither were the physicians asked if they were prepared to give up beds or to give up their out-patients. At the election of the assistant physicians neither of the two conformed to the mode of practice demanded for the physicians and subsequently a rule was passed to meet their mode of practice, and at the same time they retain beds and have charge of the out-patient department, and one takes charge of a skin department so that by no chance does a physician have a skin case under his care.

I should be glad to have your opinion whether the physicians have been fairly treated in this matter and whether the governors are acting within their rights in taking away from the physicians the rights and privileges under which they came to take up the appointment in Reading.

I am, Sirs, yours faithfully,

Reading, August 1st, 1906. FRANCIS HAWKINS.

*** An officer elected under one set of regulations has a distinct grievance if during his term of office the regulations are changed so as to affect his position. So far we are with Dr. Hawkins. But if in the opinion of the authorities the change is in the nature of a reform (i.e., if the authorities

believe that an alteration in the regulations will be for the good of the institution which they administer and of the public which it serves) it is right that the change should be made. We cannot express any conclusion as to the legality of the action of the governors. As to its advisability, our general view is that any modification of hospital rules which tends to break down artificial barriers, purporting to divide the medical profession into classes and sections, is for the good of the profession and of the public. Very large questions are opened by this aspect of the matter.—ED. L.

THE TREATMENT OF IRITIS, INTERSTITIAL KERATITIS, &c., BY ACETOZONE.

To the Editors of THE LANCET.

SIRS,—During the last 16 months I have treated all my cases of intra-ocular inflammation on the assumption that they were the result of bacterial action and with gratifying results. The *post hoc ergo propter hoc* fallacy of basing the constitutional treatment on such history as is obtainable from the patient has been so far the rule of practice and the possibility that there may be no connexion between the constitutional disease and the intra-ocular inflammation habitually lost sight of. Are we to ignore the possibility of organisms that have no connexion with venereal disease causing iritis in persons who are the victims of syphilis? Iritis would not be diagnosed as gonorrhœal iritis in a syphilitic subject were it not for the urethral discharge. In this form of iritis it is practically certain the ocular condition is due to circulating toxins, and if we may assume as much in syphilis, rheumatism, &c., very important results follow, for bacteriology furnishes us with proof of the importance of early treatment, as, for instance, in diphtheria, in which disease the antitoxin is almost useless after the fourth day. A most unsatisfactory feature of constitutional treatment in syphilis and rheumatism is the slowness of its action. If in these diseases early treatment is imperative we must infer the toxins have done their worst and specific remedies will have little effect. Toxins being almost certainly albumoses, it follows that the blood should be hurried as frequently as possible through the liver to convert these bodies into urea and to the kidneys and skin in order that the urea may be excreted, and this metabolism will be facilitated by systematic exercise and copious potations of water.

I have made it a routine practice for several years to inquire into the condition of the bowels in all cases of eye inflammations and find, especially in children, that they are mostly very foul, the association being so frequent that it can scarcely be a fortuitous one. In the treatment of such cases I used to begin by the internal administration of resorcin or salol, but the former sometimes produced quasi-carboluria and the latter was apt to make the patient ill. Having found that acetozone, as in typhoid fever, could be used with advantage as an intestinal and general antiseptic in eye diseases I gave it first in three-grain doses dissolved in four ounces of water. Subsequently I increased the amount of water largely and my present method is as follows. The patient drinks a tumbler of water and takes a three-grain capsule of acetozone immediately, after which he walks briskly for ten minutes and then takes a second glass of water and again walks for ten or 15 minutes. Four doses are taken daily—before breakfast, in the middle of the morning, in the middle of the afternoon, and in the evening. The results have been satisfactory; so much so that one will never revert to the old methods, and especially as it is probable that still better results will be obtainable by the supplementary use of recognised drugs, such as the inunction of mercury, &c.

Altogether I have used the acetozone-hydrotherapeutic treatment in 45 cases of iritis, interstitial keratitis, &c., and also in one case of syphilitic optic neuritis and two cases of sympathetic ophthalmia. If the cases of iritis are seen early, say, before the fourth day, the patient not infrequently experiences relief from pain in a very few hours and we frequently find all redness gone by the sixth or seventh day. We should, of course, as a routine procedure dilate the pupil as much as possible at the first visit.

The following cases treated by acetozone are of interest. (*a*) A case of sympathetic iritis with keratitis punctata that had been under treatment off and on for 12 months in the ophthalmic department of a large metropolitan hospital. At the patient's first visit to the Croydon General Hospital on Dec. 16th vision was $\frac{6}{12}$; on Dec. 20th it was $\frac{6}{9}$. Three weeks later vision was normal and the eye appeared to have made a perfect recovery. The patient was seen about ten days ago and the eye remains free from all traces of deposit. (*b*) A second case of sympathetic iritis. This patient came to the Western Ophthalmic Hospital on Nov. 17th with vision reduced to counting fingers (Dr. F. Hewkley). On Nov. 24th vision was $\frac{6}{12}$; on Dec. 1st it was $\frac{6}{9}$, and slight keratitis punctata; on Jan. 19th there was no trace of deposits even under high magnification. This patient was seen three weeks ago and the eye seemed to be free from all trace of disease with the exception of a little uveal pigment on the lens.

In all nine cases of interstitial keratitis, several of extreme severity, were treated by acetozone. In one case not only was the cornea absolutely opaque and salmon-coloured but bulged in a most alarming way. In the course of six weeks the cornea had cleared sufficiently for the patient to get about and the vision is now $\frac{6}{9}$ – $\frac{6}{6}$. In a second case one eye was entirely lost before the child came under my care and the sight in the other was reduced to seeing hand movements at a few inches. This, however, was relieved in less than a week, although all previous remedies used in an ophthalmic hospital had proved unavailing and the mother's gratitude was profound. The child is still under treatment but as the disease had lasted for many months and the cornea were leucomatous before the child came under my care it is improbable that there will be any considerable improvement in vision. A third case that has been under treatment for over six months gave excellent results as regards vision ($\frac{6}{9}$), although the patient was unable to carry out his instructions properly on account of his work. One case with salmon patches recovered in three months with vision $\frac{6}{9}$ and another in eight weeks with vision $\frac{6}{9}$. The remainder are still under treatment.

The acetozone treatment has also been used in a case of syphilitic neuro-retinitis that progressed rapidly in spite of pil. hyd. c. creta, II. t.d. The disease was promptly arrested, the discs became normal, and vision $\frac{6}{9}$ easily in six weeks. The results in all forms of iritis were admirable and equally so in interstitial keratitis when seen within a week or so of the commencement of the disease. Indeed, in the latter two or three days at times suffice to remove the corneal opacity and nothing remains but a little keratitis punctata. In future cases there is no reason why the treatment should not be combined with inunction but in nearly all the cases treated by acetozone mercury has been tried for at least six weeks and in some cases for several months. The only objection to acetozone is the price and this is a consideration if the drug has to be used for several weeks. Doubtless in iritis this would be inconsiderable and the money wisely spent. Three-grain doses have excellent results but it is not unlikely larger doses could be given with advantage. The use of the drug by means of capsules may have its drawbacks, but this method has advantages, and in eye diseases there is not the objection to the exhibition of the remedy in solid form which might be offered in the case of enteric disease. However administered there is no doubt it should be given in eye cases with a much larger quantity of water than in typhoid fever. The limitations as to space prevent my taking up the bacteriology of the subject but I propose to deal with this on another occasion.

I am, Sirs, yours faithfully,

CHARLES WRAY, F.R.C.S. Eng.,
Surgeon, Western Ophthalmic Hospital; Ophthalmic Surgeon, Croydon General Hospital and Croydon Infirmary.

COEXISTENCE OF DISEASES.

To the Editors of THE LANCET.

SIRS,—I read with much interest your annotation on the Coexistence of Diseases in THE LANCET of August 25th, p. 515. In it the following sentence occurs: "The result of an infectious disease occurring in a tuberculous subject does not essentially differ from that found when a healthy subject is attacked except that in the former the powers of resistance are less and not infrequently an intercurrent affection is so badly borne as to threaten seriously the patient's life." That recalled to my memory a case that came under my notice some three years ago in which scarlet fever,

occurring as an intercurrent affection in a patient suffering from tuberculous disease of the hip-joint, appeared to have a beneficial and curative influence on the tuberculous condition.

A boy, aged seven years, was under treatment for tuberculous hip disease with a sinus discharging on the postero-external aspect of the thigh when he had an attack of scarlet fever. He was removed to the isolation hospital. A large abscess had now formed on the anterior aspect of the thigh in the region of the hip and it was necessary to operate. Under an anæsthetic the abscess was incised and a gauze drain was put in. For the next two or three days the boy lay in a very precarious condition and it was doubtful if he would recover. However, the fever abated and he began to improve. As convalescence progressed the tuberculous condition got very much better and by the time convalescence was established the tuberculous sinuses had healed. The change in his general condition was also very marked. At first he was thin and pale, but during convalescence he put on weight and when discharged was quite fat and rosy. He was also able to run about and had no discharging sinuses, a state of affairs which had not been his for over two years.

The question is whether the cure of the tuberculous condition was influenced by the scarlet fever. I have not had an opportunity of watching another case similar to the above. Of course, there is always the chance of the cure occurring at that time being a mere coincidence, but I must say I have never yet seen a tuberculous condition take such a rapid turn for the better.—I am, Sirs, yours faithfully,

August 25th, 1906. JOHN ALLAN, M.B.

HÆMATOGENOUS ALBUMINURIA.

To the Editors of THE LANCET.

SIRS,—I was interested to read Dr. R. Hingston Fox's article on this subject in THE LANCET of August 25th, p. 497. Since the publication of Sir A. E. Wright's observation on the influence of calcium lactate in so-called "functional" albuminuria I have tested the point repeatedly. In four cases which I suspected to be of this type the albuminuria was readily controlled by the drug, but in cases with other evidence of kidney disease calcium lactate had no obvious effect. I therefore agree with Dr. Fox that it is a useful diagnostic test and that the primary cause of the albuminuria is the state of the blood. But I am inclined to think that he rather belittles the disturbance of the cardio-vascular mechanism in these cases. The great tendency to fainting, especially on standing for some time, and the appearance of albuminuria only after getting up, strongly suggest a lax condition of the vaso-motor system which, failing to compensate for the effect of gravity, allows both cerebral anæmia and back pressure on the kidney to occur. These considerations have led me to use digitalis as well as calcium lactate and, so far as I can judge, the effect has been good.—I am, Sirs, yours faithfully,

W. LANGDON BROWN.

Finsbury-square, E.C., Sept. 3rd, 1906.

THE GERMAN LANGUAGE AND MEDICAL MEN.

To the Editors of THE LANCET.

SIRS,—I have received several letters from your readers which indicate that there is some difficulty in obtaining Messrs. Fiedler and Sandbach's little book. With your permission I will give the specification for order through a printer: "A First German Course for Science Students," by H. G. Fiedler and F. E. Sandbach. Alex. Moring, Limited, the De la More Press, 32, George-street, Hanover-square. 1906. 2*s.* 6*d.* net. I am, Sirs, yours faithfully,

ARTHUR LOXTON.

Sept. 3rd, 1906.

SANITATION AT ST. MORITZ.

To the Editors of THE LANCET.

SIRS,—In answer to an inquiry by Dr. T. W. Parkinson on this subject[1] there appeared in THE LANCET on Sept. 16th, 1905, p. 854, a letter signed by Dr. J. F. Holland and Dr. P. Gredig which stated with regard to the winter season 1904–05 as follows: (1) that the main drainage was sound; (2) that the public health was in no way endangered; and (3) that the chief main drainage was then carried right out into the river Inn, whence it issued with torrential force.

The wish was no doubt father to the thought. It seems, however, on inquiry, (1) that the experts referred to in the letter had (as the authorities frankly admit) recommended that all drainage into the lake should be stopped and another system adopted, thereby showing that in their opinion the existing main system was faulty; (2) that complaints of suppurative tonsillitis and like ailments were extraordinarily numerous during the winter in question, and when septic illness occurs in an antiseptic air and the drains are subsequently ordered to be remodeled it is more likely that the public health was endangered than not, though actual typhoid fever, diphtheria, &c., were absent; and (3) that (as the authorities likewise admit) the new main system instead of being complete on Sept. 16th, 1905, as stated in the letter, was not complete in March, 1906, or expected to be so till later.

The fact is that St. Moritz had rapidly outgrown its sanitary system, and though the authorities assure us that they are doing their best to put things right the publication of a certificate by first-class independent professional experts that the entire system, both main and subsidiary, is now perfected and up-to-date would be more conclusive than any other assurance. At present the only promise obtainable (in March last) is that the work when complete will be certified by an authority, but by whom and whether or where the certificate will be published is not stated nor whether it will include the subsidiary system.

I trust I have said enough to show that there is nothing unreasonable in now asking for the publication of this certificate in THE LANCET, especially as it is over a year since the London Sanitary Protection Association reported confidentially on the matter and suggested the necessary alterations. Such a step would at once remove the uneasiness to which Dr. Parkinson referred, and would be in the best interests of the place to which many of us owe much.

I am, Sirs, yours faithfully,

H. CAMPBELL JENKINS.

United University Club, London, Sept. 3rd, 1906.

THE MEDICO-LEGAL EXPERIENCES OF A GENERAL PRACTITIONER.

To the Editors of THE LANCET.

SIRS,—Though he gets it up for examination purposes the average general practitioner has but few important opportunities during even a long life of work of exercising his medico-legal knowledge. Even if a great or important incident does come in his way the introduction of an "expert" deprives him of much of any credit or glory obtainable. To most of us our medico-legal experiences consist of an occasional inquest which, in the majority of cases, presents no difficulty, medical or legal, and does not require the employment of the coroner's pet pathologist; an occasional lunacy certifying, which does often present some difficulty; and more rarely a police-court case—viz., assault, &c. Nevertheless, though great occasions are exceptional, minor incidents are not so infrequent in which interesting medico-legal points are involved.

At some time or another nearly every one of us must have been called upon to decide as to the sobriety or otherwise of a given individual, and much may depend on our verdict. The difficulty of decision is often very great and the gradations between "dead drunk" and "had been drinking but was not drunk" are many and subtle. Even the interval between the apprehension of the accused and the appearance of the doctor may have been sufficient to allow of the disappearance or modification of the signs of intoxication. The accused may lighten one's task by admitting to a glass or two, or to having "mixed." The most should be made of such admissions before imposing all those tests of sobriety familiar to the police, for it is possible for the man who has exceeded to pull himself together and neutralise the evidences of alcoholic excess and evade the pitfalls contained in polysyllabic alliterative lingual trials. In all cases the medical examiner should conduct his examination before witnesses, and fortify and support his opinion by the testimony of others whose sobriety should be undoubted. An inquiry into the history of the

[1] THE LANCET, August 14th, 1905, p. 563.

previous hour or two usually yields valuable evidence, while surveillance for an hour or so after the official examination is advisable. On two occasions I have negatived the charge of intoxication by proving the accused to be suffering from locomotor ataxy; in one of these cases the introduction of the patient into a well-lighted room had the effect of steadying his staggering gait. An examination of the eyes sometimes reveals a cause for obliquity: the discovery of night blindness accounted for the vagaries of one individual; the existence of previously undiscovered hypermetropic astigmatism dispelled a charge of carelessness in another. Again, while waiting about at the Guildhall I was called on to give medical evidence; the defendant, a van driver, squinted. I stated that he was most likely one-eyed. Investigation on the spot proved that to be the condition and influenced the verdict.

It is in sexual or obstetric cases that we meet with most of our problems. Questions are often asked as to pregnancy, paternity, &c., without any forensic involvement which, however, have a medico-legal interest. Once I was interviewed by an irate matron who produced her husband's blood-stained shirt, some black hairs collected from his coat sleeve, and from his coat pocket the unused half of a first-class return ticket to a well-known suburban resort. The lady argued from the position of the bloodstains that they were not from "his" person but "hers," and could I state if the stains were menstrual blood. I said that there was no proved distinction. The circumstantial evidence plus the *pieces de conviction* showed that the lady had a grievance, but I considered my friendly offices were better employed in pointing out difficulties of evidence and advising her to ignore for the present the presumption of guilt. Thrice I have been asked to examine girls with reference to virginity. In one case, where there was no specific charge, I refused to examine the young woman, pointing out that the result was nearly as likely to be negative as positive, and in the absence of a direct charge she was running the risk of an uncertain verdict which she was not compelled to do. The second case was that of a half-witted girl, aged 14½ years (now in a lunatic asylum), on whom a man was charged with rape; as she had apparently been a consenting party no marks of violence were visible, the lax and distensible hymen was untorn and the vagina dilated. I considered penetration possible but found no local evidence of force. Subsequent evidence proved that the girl was unchaste. The third case was that of a girl, aged 15½ years, whose bedroom a man was seen leaving; actual connexion was denied, and the girl objected to examination. I pointed out to the parents that she could not be compelled to submit, and that if I examined her it must not only be in the presence of witnesses but by her consent and in this case at her request. Result, *virgo intacta*. Circumstances requiring it, I once examined per vaginam a *virgo intacta*, aged 21 years, and found the os and cervix uteri deeply notched on one side; the condition was undoubtedly congenital but might have been taken for an injury resulting from delivery and led to the hypothesis of past maternity.

In some districts abortions and miscarriages are frequent and mostly occur without medical attendance, for the prevention of conception or the annulling the result are processes which appear to be now so well understood and so widely practised that application is not probably made so frequently in these days to the doctor to effect the process as formerly. Most of us have been asked to procure abortion. Such a request has been made to me on two or three occasions, and on each I have without undue delay confided the circumstance in all its details to some professional friend, whom I have requested to note in writing the case, that in the event of abortion occurring in my applicant, and accident or scandal accompanying it, I might be able, if necessary, to refute a charge of complicity. Several times while attending a miscarriage I have found small empty bottles labelled "pennyroyal" stowed away out of sight behind larger objects on mantle-shelf, chest, or dressing-table, and more than once has the patient confessed to the means she had adopted to cut short gestation.

Some months ago I was called to attend a woman whom I found very ill with uterine hæmorrhage and abdominal pain. She told me that during the previous week she had "lost a lot" and had probably miscarried. I found her to be suffering from an incomplete abortion and lead poisoning. She recovered after a long and serious illness and confessed that finding herself pregnant she began about the seventh or eighth week to take daily as much sugar of lead as would lie on a sixpence. She aborted at about three and a half months. In a case where I diagnosed internal hæmorrhage the woman was taken suddenly ill with very severe abdominal pain and died in a few hours. I found an empty bottle of "pennyroyal" and was told by the husband that the deceased believed herself to be pregnant again. By permission I, with the help of a brother surgeon, made a post-mortem examination and found a large quantity of blood in the peritoneum which had come from a burst vein in the left Fallopian tube. The patient was not pregnant and we could not find any evidence of an extra-uterine pregnancy. The case reminded me of the death of Miss Adelaide Neilson; she had an attack of gastralgia while driving in the Bois de Boulogne and died 12 hours later from syncope. Dr. Brouardel made a post mortem and "disclosed the extraordinary fact, one of the rarest in the history of medicine, that in her writhing she had ruptured a varicose vein in the left Fallopian tube, and had died of hæmorrhage." (Letter in *Times*, August, 1880.) Query, may not the hæmorrhage have caused the writhing?

That an experienced matron may erroneously believe herself to be pregnant hardly requires illustration. Mrs. S., the mother of several, engaged me to attend her one December. She sent for me in time. I found her in bed, with nurse, &c., in attendance and all in readiness; pains occasional. On examination I found her not to be pregnant, much less in labour, told her to rise and dismiss the nurse, and I prescribed for the stomach-ache. Two months later I was summoned to her again, this time for a miscarriage at about three months. Consequently she must have been about six or seven weeks advanced on the first occasion. On the other hand, pregnancy may exist without the cognisance of the woman; examples are plentiful. My first experience was years ago with a woman, aged about 44 years, who had been married 20 years without ever being pregnant. She sent one evening on account of severe stomach-ache and was much surprised on being informed that she was in labour. She was safely delivered with the aid of forceps. Suspicion and incredulity are naturally excited when an unmarried woman denies an existing pregnancy. Once I had a young woman persist in her denial even after delivery! But I think that ignorance may rarely be genuine. A "simple" and single woman, aged 35 years, living as one of a large family of brothers and sisters, fell in labour one evening. No suspicion of her condition existed. I was sent for to treat colic. I "looked" my diagnosis at her step-mother, a matron of knowledge, only to be answered by pained disbelief. I am quite sure the patient herself did not realise the truth, until after a short, easy labour, she remarked: "It is a baby, then, after all." Paternity was admitted by the infant's father, who had gone abroad months before, after one intimacy. A call in the middle of one night fetched me to a confinement where I found the mother on the floor, and the baby, a fine boy, head downwards in a chamber-pot with water up to the brim. This was a fourth child, and two experienced matrons were present at birth, yet so frightened were they all that no attempt was made to save the child, though, as I pointed out, to knock the vessel over on to its side would have been sufficient. The infant was dead—drowned because of the nervous horror of those present. Had the patient been unmarried, and confined when alone, the circumstances might have excused the suspicion of infanticide, yet evidently the accident was possible.

Twice or thrice I have been called upon to decide before burial if the corpse were dead; in every case the body was that of a child and the presence of incipient putrefaction, in one case a fine greenish line along the free edges of the eyelids, left one in no doubt. These cases all occurred in cold weather, and the calm of the features with a tendency to rosiness of the face caused the doubt of the friends as to death.

A fine young man after shooting his employer (not fatal) shot himself. I opened his head and found the wound of entrance on the left temple a little above and in front of the left ear; the bullet traversed the brain and was found lodged against the inner table of the skull at a point somewhat behind and above the right ear. I gave it as my opinion that the deceased must have been left-handed; a relative was recalled by the coroner and stated that he was.

A middle-aged woman cut her throat with a razor one Saturday. I was fetched from a cricket-match three miles away. No one had touched her. She lay in a large pool of clotted blood on the floor of her cottage. I found her just living. The wound was four inches long and longitudinal in

position, running parallel to the right side of the larynx and trachea. The great vessels had escaped injury and she recovered after some weeks. She was watched by her relatives for some time, but giving no trouble surveillance ceased. Exactly one year after her first attempt, again on a Saturday, she successfully committed suicide by drowning in a shallow well, being found head downwards with the lid resting on her ankles.

It is astonishing what a healthy lot proposers for life insurance almost invariably say they are. Deliberate suppression of the truth or falsification is probably the exception, but unconscious bias in his own favour is, after all, only natural in the account given of his past health by an examinee. I always inquire of a proposer if he belongs to any benefit society or sick fund, and follow this up by asking how long he has been a member; then a tender inquiry if he has ever been on the funds and, if so, how often and for how long a time, and what for, usually brings to recollection some forgotten illness or indisposition. Quite frequently an individual will deny ever having suffered from rheumatism, but admits that he has had "growing pains." In these days of conscientious objectors and cranks it is as well to take note of vaccination. Insurance companies will probably find it necessary to revise their premiums in the case of the non-vaccinated, for that class is increasing all over the kingdom.

Recent legislation may bring the general practitioner more often into the law courts. The Workmen's Compensation Act offers chances which the malingerer does not neglect. We all know how fatal to fortitude is the fact that a sufferer belongs to two clubs, without the added inducement of compensation for accidental injury. That stock malady, the sprained back, an injury so easily obtained, so successfully simulated, so difficult to disprove, with its entirely subjective symptoms and absence of all objective sign, and so prone to recurrence, with the "railway spines" and "nervous shocks," will be supplemented by other maladies. Ordinary illness, such as a common cold, will be said to be an accident, the result of following one's employment in bad weather, &c.

I am, Sirs, yours faithfully,
G.P.

OPERATIVE TREATMENT IN CERTAIN CASES OF INSANITY.

To the Editors of THE LANCET.

SIRS,—In cases of simple insanity—cases which cannot be referred to any structural lesion of the brain—there can be little doubt that disturbance of the cerebral circulation is an important, if not the essential, pathological factor. Anæmia of the brain and symptoms of mental depression necessarily follow a diminished supply of blood to the organ, and, on the other hand, if it is abnormally increased, hyperæmia and mental excitement will be the consequent effects. In cases in which the quality as well as the quantity of the blood-supply is altered and in which an impediment to the return of blood from the head exists, the effect will not be so simple but will exhibit corresponding complications. Many cases of simple insanity, however, appear to depend almost entirely upon active hyperæmia and increased blood pressure. I allude to cases in which the individual's powers of perception, recollection, thought, emotion, and volition are all more or less intensified as well as perverted. The condition of these patients resembles very closely the delirious state of those suffering from pyrexia which is undoubtedly due to increased blood pressure. To the same cause also may be ascribed the mental excitement produced by stimulants and by the administration of ether or chloroform.

Delirium so closely resembles the acute form of mania that persons suffering from it have been improperly ordered into confinement as maniacs. The diagnostic difficulty is easily explained when we remember that increased blood pressure is the main cause in both cases. Again, in cases of mania the more acute the symptoms the greater the cerebral disturbance and insomnia, the more favourable is the prognosis. In such cases as soon as the flow of blood in the cerebral vessels returns to its normal state the mental derangement disappears, leaving the mind clear, as in delirium due to some febrile disease. There are cases, however, of acute mania which improve up to a certain point and then go no further but remain stationary for an indefinite time and at length exhibit signs of approaching dementia. Now the question arises, How is it that these cases do not recover? Is it because the arteries of the brain have become permanently enlarged and the supply of blood in such cases continues to be abnormally excessive? Can nothing be done to lessen the supply? Why not ligature the carotid artery with this object in view? I have a case under my care of this kind at the present time and should like to hear the opinion of some of your readers on the above suggestion. Would the operation be likely to be of any value? Would it be justifiable to perform it experimentally with the consent of the relatives of the patient?

I am, Sirs, yours faithfully,
August 31st, 1906. M.R.C.S., &c.

THE ELECTRICAL RESISTANCE OF THE BLOOD AND URINE AS A TEST OF THE FUNCTIONAL EFFICIENCY OF THE KIDNEY.

To the Editors of THE LANCET.

SIRS,—My attention has been called to a research by Dr. Dawson F. D. Turner, published in THE LANCET of July 28th, 1906, p. 223, under this title. It is quite impossible to obtain a measure of the concentration of a specimen of blood in salts by measuring the electrical resistance of the blood as Dr. Turner supposes. It has been shown by various observers—first of all by Professor G. N. Stewart[1] and Roath[2] independently of each other—that the coloured corpuscles are practically non-conductors owing to their impermeability to the ions of plasma.

The conductivity of blood depends not only on the salts of plasma but on the relative volume of corpuscles and plasma.[3] The reason why Dr. Turner obtains so marked a diminution of resistance in blood in pernicious anæmia is because the number of corpuscles is so greatly reduced. It is only by measuring the conductivity of the serum that any notion of its richness in salts can be obtained. I have published results of conductivity measurements[4] and freezing point observations on blood and serum in numerous diseases. In pernicious anæmia (three cases) I found no warrant for concluding that the proportion of salt is increased.

I am, Sirs, yours faithfully,
THOS. MATHESON WILSON, B.A. Toronto, M.S. Chicago.
Physiology Department, University of Chicago, August 18th, 1906.

WHAT IS A SPECIALIST?

To the Editors of THE LANCET.

SIRS,—As a contribution to the correspondence under the above heading I venture to describe my own case. Four years ago (this coming December) I had to decide whether to resume medical practice as a specialist or as a general practitioner. During the preceding three years I had held a hospital appointment near London which offered me facilities to qualify myself specially in eye, ear, and throat work. The cult of pure specialism seemed to present undue financial risks. I therefore purchased a practice in a town with a population of 120,000 without a resident specialist, and having a children's hospital staffed by general practitioners without a single specialist appointment. I entertained hopes of being able to combine general with special practice. I was prepared to face difficulties, for my five years' experience of general practice had been of educational value in certain directions. On taking up my residence in the town I called upon an unusually large number of my medical brethren and after candidly explaining my position sought their support in my special refraction work, &c. In this connexion, however, I soon discovered that all my *confrères* were bonded by ties of medical fellowship and that they had no "side chains" for a colleague however specialised his claim for professional coöperation. For the first nine months I was content to assist four afternoons a week in the special departments or hospitals of an adjacent city whose medical might overshadowed the town in which I practised. Then I became impatient of playing the part of hospital drudge *pour passer le temps*. The Micawber-like spirit of waiting served me not. The desire possessed me to secure

[1] Stewart: Centralblatt für Physiologie, 1897, p. 332.
[2] Roath: Ibid., 1897, p. 271.
[3] Stewart: Journal of Physiology, vol. xxiv., 1899, p. 356.
[4] Wilson: American Journal of Physiology, March, 1905, and August, 1906.

an appointment as an additional medical officer in my special department at our children's hospital. But my advances in this direction were met with chilling disapproval by the members of the hospital staff. I was speedily made to realise the strength of that barrier wall which is created by provincial hospital men as an exclusionary measure against other medical practitioners residing in the same town. Preventive and hygienic work amongst the children in the schools next offered attractions to me as seeming to afford scope for the energising of my somewhat restless spirit. I was abetted in this by the fact that the medical officer to the education committee was not particularly interested in eye, ear, and throat work. I therefore suggested collaboration with him in this special department, and even framed an elaborate scheme of special medical school inspection which, I believe, was not devoid of some redeeming features. Once again did vigorous opposition confront me. I was informed by one and caucus that I, a general practitioner, had ethically no right to assume possession of any special knowledge and experience superior to that of any other general practitioner. This trades union spirit animated the forces fighting against me and—triumphed. My next step was to organise a dispensary for children and diseases of the eye, ear, and throat, of a special, semi-gratuitous, self-supporting character. On discussing my little scheme with a London ophthalmic surgeon recently I was informed that its analogue can be seen in different continental cliniques, notably that of Dr. Darier of Paris, who was unprovided with a hospital appointment and devised his clinique to meet this want. My scheme went further. It was an honest attempt to solve certain medico-social problems. My medical brethren are attacking my dispensary work by deploying against it a system of covert slander which is more effective than open attack, for I am powerless to combat it. A little later I opened special consulting rooms in our professional square and on a brass plate advertised the fact that I attended at certain hours on certain days for special consultations on diseases of the eye, ear, and throat. This year in Ostend I saw to my joy similarly announced by a medical man consultations for *malades des enfants*. With great interest I read in the letter of "S. H." of the common custom in Germany and Austria of such door-plate indications. I also notified my patients of my new departure in professional work by means of a printed card and a notice on my bill-heads. For I had to work to live!

These advertising methods have been deemed to be so atrocious that not one medical man has introduced a special case to me at the "Square," or has asked me to meet him in special consultation. My colleagues do not even trouble to reply to my letters respecting their patients who persist in consulting me. Whilst remaining personally friendly with one and all, professionally I am subjected to a boycott which daily menaces me in my practice. I thought to soften the hearts of my opponents by writing a little book which you, Sirs, kindly noticed in a recent number. I find, however, that the local medical men will not buy a copy even at 1*s.* net.

In conclusion, I contend that I have a legitimate right thus to push my "specialität," although a "practischer arst," and that it is degrading to the profession for medical men to encourage, as they do, advertising opticians and hospital abuse, while ostracising members of their own profession. I write my pioneer experiences—*pour encourager les autres*. I am, Sirs, yours faithfully,

August 27th, 1906. M.D., B.S. LOND., D.P.H. CAMB., &C.

To the Editors of THE LANCET.

SIRS,—I am but a comparatively young member of the profession and, no doubt, ignorant of much which may ere long cause me to modify the opinions of which I am at present possessed. I am, however, for the moment bound to aver that your correspondents appear to me to approach this subject from a point of view which is ethically incorrect. I have been connected for the past few years with a special hospital and have devoted a considerable amount of time to the class of disease which is there treated and, supposing that I have brought to bear upon that subject a fair amount of intelligence, may perhaps lay claim to some special knowledge of it. So far, however, as my own feelings are concerned I would not dare to call myself a specialist. I look forward to the time when the public shall regard me as a specialist and when my professional brethren shall know me as one, but to assume the appellation seems to me beyond my just right. The impression I have derived from my masters in medicine is that no one of them would like to call himself a specialist, though each one would like to be in possession of special knowledge of some particular branch of our science and art. It is at any rate a view with which I am content.

But the strongest argument which can be advanced against the assumption of the term specialist may be advanced from the side of the public. A man in want of a doctor seeing a brass plate with a name and a description of "physician and surgeon," or some equivalent, upon it, knows that within is one whom he may expect to have a reasonable amount of medical knowledge, at least as reasonable as medical authoritative bodies can make it. What is a member of the public to know when he sees the appellation of specialist upon a plate? It may be that the man within really has some special knowledge, or it may only be that he thinks he has, or it may be that he desires to give the public the idea that he has it, though in fact he has it not. In any event the man is applying to himself an adjective which no authoritative body vouches for.

I am, Sirs, yours faithfully,

August 29th, 1906. X.

To the Editors of THE LANCET.

SIRS,—It seems to me that the days are past when a man might make up his mind at the outset, or soon after, which branch of our profession he is going to adopt. Certainly this is true with respect to surgery. Let it be granted that a man at the beginning of his career says, "I wish to be a surgeon. I shall so far as possible arrange my work with that end in view. I am not a grasping man and I do not want a plum. I merely wish ultimately to practise surgery as distinct from medicine and I hope I shall be granted facilities for starting in that direction. I am willing to devote so much time to it and to lay out so much capital. Both are above the average amounts." I maintain that, however well such a man may carry out his intentions, however well he may ground himself, and however conscientious and perhaps clever he may be, he is in infinitely greater degree the victim of chance. For instance, it is in the first place, judging from the numbers published, at least two to one against his passing the primary Fellowship examination of the Royal College of Surgeons of England, an examination in two subjects each of which is far too vast for anyone to know the whole of it at once and in which there is no defined schedule. In each only about one tenth of the knowledge is of practical value, the rest is, as a matter of fact, soon forgotten to make room for useful matter. Any particular point in either can be, and is, at once easily revised for purposes of research or for operative procedure. It is said that one can make a certainty of passing this examination and that the best men get through. The first of these statements is quite inaccurate. At any one attempt the element of chance is utterly demoralising. The second statement is in the main true, though numbers pass who never deserve to and numbers fail who would make far better surgeons than many who pass. Many who pass become surgeons simply by reason of having passed, and, indeed, have never from the outset laid down for themselves any plans at all.

In the second place it is at least a two-to-one chance against our man in the final examination. So that only one-ninth of those who enter for the Fellowship of the Royal College of Surgeons of England obtain it. The result time and again is a great loss to the medical profession and to the country, because the requisite qualities of a surgeon cannot be determined finally and wholly by any sort or kind of examination. They might be found out by the apprenticeship system and if the results of original research work were taken into account. At present the quick-witted man with a good temporary memory, who can write quickly, though without a grasp of principles, may happen at the time to be thinking in the same way as the examiner, may pass, while a systematic, plodding man will fail. I maintain that among this eight-ninths of those who desire to become Fellows of the Royal College of Surgeons of England are many who have failed not because they showed themselves incompetent to make good surgeons but because the tests are not properly devised. Failing in examinations there is no alternative proceeding and they are driven to take

up some branch of the profession which is uncongenial and so to "make a mess" of their lives.

Having, however, passed the examination for the Fellowship, and having so become qualified to follow his profession as a pure surgeon by reason of the appointments thrown open to him, the "fortunate" young man has to spend several years in which he might be improving the science and art he has adopted, and his own mind in particular, in grinding out the elements of anatomy to men who will never want one-twentieth part of what is taught them, or in writing a book before he has had the necessary experience of the subject. When he is past his prime he will perhaps get the chance of practising surgery. At a later stage, just when a record of his experience would be of infinite value to the profession, he is far too sick of it all to set it forth, and little wonder; moreover, he has no incentive in the form of future gain. I maintain that this state of things is not conducive to the advancement of the science and art of either surgery or medicine and it follows that the ranks of the specialist, who, either by natural selection or again by chance, are at present taken from a small class, are not filled so well as they could be were the process of selection different. This is undoubtedly to the great loss of the nation.

I am, Sirs, yours faithfully,

August 28th, 1906. UNLUCKY PLODDER.

PORTUGUESE QUARANTINE REGULATIONS.

(FROM OUR SPECIAL SANITARY COMMISSIONER.)

PART I.

THE NEW LAW ON MARITIME SANITARY PRECAUTIONS.—THE NEW MARITIME DISINFECTING STATION AT OPORTO.

IN respect to maritime sanitation Portugal has a policy of its own. It is governed by a law dated Dec. 24th, 1901, which may be considered an improvement on the international convention adopted at Venice in 1897, though in several respects it is inferior to the international convention subsequently approved at Paris in 1903. In any case, the main practical fact is that communications with Portugal by sea are now less liable to be impeded by sanitary or quarantine regulations. Undoubtedly Portugal had good reason to be on its guard. It is a poor country and large sections of its population overcrowd very old and insanitary dwellings where they may lack sufficient or suitable food. But apart from these general predisposing conditions, there is a specific reason why the country should have frequently suffered from the importation of epidemic disease. A very large proportion of the maritime trade is with the Brazils and South America where yellow fever abounds among other pestilences, and Portugal has good reason to be careful especially in regard to yellow fever. The bilge water in the old wooden ships facilitated the importation of the larvæ of the stegomyia, and the conditions of the modern copper-bottomed ships are not so favourable to the development of mosquitoes, but, nevertheless, the precautions now taken are less irksome than formerly while losing nothing in thoroughness.

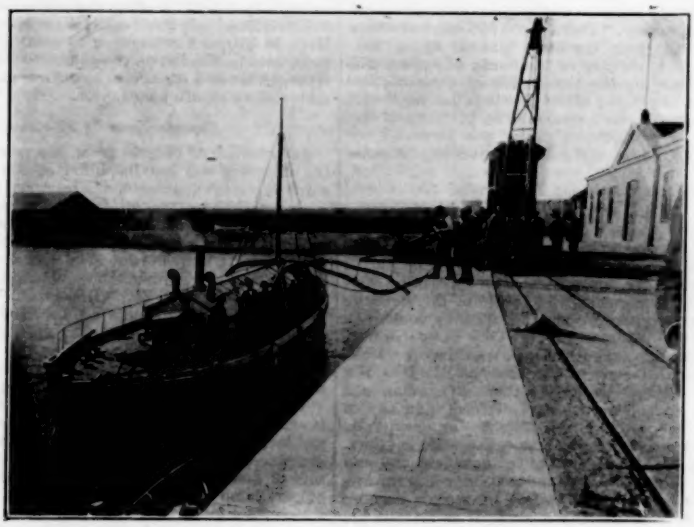
A few years ago when a ship arrived at Leixoes, which is the port for Oporto, it had to proceed to Lisbon if refused free *pratique*. This is a journey for a steamship of from 12 to 15 hours and involves a great loss of time, coal, and general working expenses. Lisbon was the only port in Portugal possessing a suitable disinfecting station for cases of yellow fever, plague, or cholera. When the cholera prevailed at Hamburg and at Havre ships could not land their passengers or goods at Oporto, for it took less than seven days to come from the infected German and French ports. So great was the trouble and the loss that the Oporto Commercial Association determined to erect a disinfecting station at its own expense and thus save the loss incurred in sending ships and passengers to Lisbon. The new law of 1901 rendered the expediency of such a measure more obvious. According to this law a Portuguese port can only be declared contaminated by the Minister of the Interior through the Director of the Department of Public Health and after the opinion of the General Inspection Services and of the Superior Council of Hygiene has been obtained. Even then the presence of cases of plague, cholera, or yellow fever can only be declared when their origin is such as to occasion peril from a sanitary point of view. Undoubtedly a considerable time must elapse between the notification of the first case and the accomplishment of the above stipulations. In the interval considerable mischief might be accomplished; nevertheless the law formally states that the Government alone has the right to proclaim the presence of epidemic disease in a port, and that the port sanitary authority shall not issue a *patente brute* till after such Government declaration has been officially made. It is known that there are three sorts of *patentes*. The *patente nette* is given when the sanitary and health conditions are all that is desirable. The *patente brute* makes no specification, and *patente suspecte* does not affirm that the state of health on board was good at the moment of departure. Thus it is evident that the Portuguese Government is very anxious that no unnecessary and premature alarm should be raised; yet it is equally evident that if there be any virtue at all in these sort of precautions this must depend on their being enforced in time.

In regard to the precautions which the new law stipulates must be taken against ships arriving in Portugal, these differ according to the supposed degree of danger, and many clauses in the Act are necessary to deal fully with these varying conditions. Thus there are ships coming from a healthy port with all well on board, but which have had some suspicious communication while in the open sea, or which have an unfavourable anterior record, or have no surgeon on board, &c. Then there are ships that have stopped for a short time in an unhealthy port. But, and so as not to enter into minute details, the main principle is that the ship must have been at sea seven days without there being any infectious case of sickness on board. If a ship arrives with all well on board but with a *patente brute* as coming from a place known to be contaminated, and has been more than seven days at sea, *libre pratique* is granted to all the passengers after they have undergone a rigorous examination. Their dirty linen, however, is disinfected. The ship and its cargo will be isolated and disinfected and the crew will be disinfected and subject to further medical examinations during seven days. If a ship under the same conditions has been less than seven days at sea the passengers are allowed to land, but they must undergo a rigorous personal disinfection and are only allowed to proceed to places where they can and will be watched medically till the seven days are completed. Should there, however, have been cases of illness on board, and even if these cases terminated by death or recovery more than seven days before the arrival of the ship, the passengers may be detained in quarantine but not for more than 48 hours, and then, when set free, they are to be watched when they reach their destination for seven days more. But this comparative leniency only applies to ships that are in a good sanitary condition and carry a surgeon and a disinfecting stove on board. If these conditions do not obtain then the ship is treated as if there had been cases of illness during the seven days previous to arrival. In that case the passengers are disembarked and isolated in a lazaret where they are kept in rigorous quarantine for seven days. Their luggage and persons are, of course, disinfected, as are also the ship and its cargo. The crew is treated in the same manner. When the danger is that of plague and if the ship has been to a plague-stricken port within the previous three months, or has on board goods coming from a plague-infected locality, all the rats on board must be destroyed and some of them sent to the bacteriological laboratory for examination. If the analyses show the presence of plague among the rats then the entire ship and its cargo must be rigorously disinfected. The same measures must be adopted if the rats die spontaneously on board in such a manner as to make it appear that they are suffering from plague.

Such being some of the more important regulations it will easily be understood that large maritime stations desire to have within easy reach all that is necessary to carry out the law. As, however, the Government is slow to provide the means of applying its own law, the merchants of Oporto spent out of their own pockets some £33,000 to build a disinfecting station at Leixoes and thus avoid having to send ships to Lisbon. Dr. Oliveira is at the head of this institution, and when I was passing recently through Oporto, he very courteously invited me to visit it. As only small ships

can ascend the Douro to the town of Oporto a port has been artificially constructed some three miles north of the mouth of the Douro by building great sea walls inclosing deep water where large ships can ride at anchor. On the breakwaters there are cranes and other facilities for landing merchandise, while in the north-eastern corner of the shore the new disinfecting and medical station has been built. It consists of extensive brick structures one storey, and in some parts two storeys, high with an embankment and frontage giving on to the water. Here the passengers and their luggage are disembarked and there are spacious waiting-rooms for them, arranged something like those of a railway station.

FIG. 1.



The boat containing the Clayton disinfecting apparatus and the pipes through which the fumes can be sent into all the disinfecting chambers of the station on shore or into the hold of a ship anchored in the harbour of Leixoes (Oporto).

Then, close at hand, there are a series of well-appointed baths. These the travellers approach from what might be described as the infected side and undress in a small compartment. While they are bathing in the next, or middle, compartment an attendant fetches all their clothes and places them within the disinfecting stove. By the time the bath is finished the clothes have been taken out of the other end of the stove and conveyed to the third or dressing chamber situated on the non-infected side of the baths. There are also large compartments where luggage and merchandise are disinfected or fumigated by various means. Finally there is a custom-house department where the purified goods are examined with a view to the imposition of custom-house dues. Close to this part of the building are railway sidings, so that luggage or merchandise can at once be despatched to its destination.

For disinfecting purposes the Clayton system is very generally used, but instead of being on shore the apparatus is placed on board a boat. Thus it can be brought alongside of the ships that are anchored at some distance from land and there discharges the fumes that kill all the rats and other vermin living between decks. On the other hand, and as shown by the accompanying photographic reproduction, it can be connected with the building on shore. Pipes are jointed together and the fumes from the apparatus are taken to one of the disinfecting rooms. This is especially used for skins and hides that are hung up on the numerous pegs prepared for their reception. Naturally the work of disinfecting the cargo of a ship necessitates the employment of a large number of porters or dock labourers. Therefore it is not only necessary to provide large bare rooms where cargoes can be spread out and fumigated but there are a dormitory and a dining room for the dock labourers where they can dine and sleep while handling goods that may be infected. During that time these labourers are prisoners. They are only let out and allowed to return to their homes when, their work being done, they can bathe and have their clothes disinfected. In the meanwhile they must be provided with meals, and consequently a maritime disinfecting station needs a restaurant establishment on the same premises. Further, there must be means of conveying food from the kitchen to the infected portion of the station without personal contact. This is done by an aperture in the wall. The food is placed on a circular tray divided vertically by a partition which closes the opening in the wall. A pivot enables the loaded half of the tray to be sent round to the other side of the wall. In the same manner the plates are returned to the kitchen. This method is also employed for passing in the food and other things to the small isolation hospital with which the disinfecting station is likewise provided. Thus, a few patients could be removed from a ship and nursed at the disinfecting station. There is, however, no accommodation for placing in quarantine a number of passengers or sailors. If this was necessary the ship would have to proceed to Lisbon.

(To be continued.)

MANCHESTER.

(FROM OUR OWN CORRESPONDENT.)

Coöperators and a Liquor Licence.

SOME time ago an hotel at Gillsland was taken over by coöperators of the northern section of the Coöperative Union and converted into a convalescent home. The question then arose as to what must be done with the licence. Some considered it inconsistent for them to have anything to do with the liquor traffic. Others thought that if they gave up the licence someone in the neighbourhood would apply for it and the facilities for drinking would remain the same, while the directors of the home would lose all control over the sale of intoxicants. The licence was retained. The question came up again at a meeting held on August 24th, when there was an animated discussion on the matter. A resolution from the Hartlepools Society dealt with it as a question of expediency, that it was hurtful to the best interests of the home, that a number of societies would not become shareholders on this account, and proposed that the directors be empowered to allow the licence to lapse at the next session. Many of the speakers said they

were teetotalers and some were interested in temperance reform, but they thought the licence safer in their hands than in those of a private brewer, as they do not push the sale of drink either among visitors at the home or the people of Gillsland. The voting showed 44 in favour of letting the licence lapse and 149 in favour of its retention. This apparent anxiety lest a dangerous power should fall into hands less scrupulous than those of the coöperators seems to be discounted by the statement that there was no real need for the retention of the licence, as those who wanted intoxicants could get them from other licensed houses in the neighbourhood. The conclusion come to makes things easy for those who love compromise, for the coöperators keep control of what is so often a curse and at the same time obtain their special beverages with the least possible inconvenience. So far as the legitimate work of the house is concerned the report appears satisfactory. There were 596 convalescents in the home during the year, the same number as in 1905, while 787 visitors had made use of the home, as against 670 in the previous year. During the month of June all the accommodation was occupied; since Easter it has been well utilised. These convalescent homes in different parts of the country are among the brighter signs of the times. They show that the principle of self-help is extending in some directions.

The Fascination of the Brickcrofts.

To ordinary people the prospect of sleeping in a brickcroft, even with the warmth of the kiln as an additional temptation, is not one that would be looked forward to with pleasure. To some men, however, it does seem to present a fascination not altogether accounted for by necessity. The representative of the firm owning the favourite brickfield at Cheetham told the magistrate's clerk that they could not keep the men away. When turned off they came back in "a larger batch," though they had a yardman and a watchdog. The men carried the hurdles and boards into the drying sheds and created a nuisance there. One man said he was homeless, out of work, short of food, and out of health, but a large proportion might have better quarters if they thought it worth their while to make a little effort. The Bench ordered food to be given to the homeless one and sent him to the Crumpsall workhouse. Some were discharged, but others were sent to prison for periods ranging from seven days to a month. The struggle to prevent the use of the brickfields as a sleeping place has been going on for a long time and it seems as far from a conclusion as ever. This is not the place to go into the question of the "submerged," but their existence shows a failure in our social system not creditable to the civilisation of to-day. The point of most interest to us as medical men is the part played by them in the spread of disease.

Death of Mr. A. G. Don of Stockport.

The death by motor accident of Mr. Don, who removed from Sevenoaks to Stockport about three years since, adds one more to the roll of those slaughtered by motor-cars. This slaughter has become so frequent as to be commonplace and the docile British public looks on it as belonging to the established order of things. An inquest was held at Sevenoaks, where Mr. Don was staying for a short time, on August 25th. The verdict, of course, was "Accidental death," the driver being exonerated from all blame. But the jury added a rider to the effect that only competent men should be licensed to drive motors on the public highway, the jury considering that the driver had not had sufficient experience. This does not agree logically with the verdict, but it shows what all must see, that with the immense and rapid multiplication in the number of motor-cars there must have been a corresponding increase in the number of drivers, and therefore the more probability of a large proportion of them being incompetent. The cause of the overturning of the car was from sideslip on a muddy road.

Sept. 4th.

LIVERPOOL.

(FROM OUR OWN CORRESPONDENT.)

Liverpool Health Committee: the Public Milk-supply.

AT a meeting of the health committee held on August 30th Dr. E. W. Hope (the medical officer of health) reported that the number of deaths during the preceding week was 345, equal to a rate of 24·2 per 1000, as against 19·9 a year ago. He said that the death-rate was a favourable one considering the meteorological conditions, &c., but the continuance of the present hot weather would probably give rise to a further mortality from diarrhœa in infants, unless great care was bestowed upon them by mothers, especially in the matter of feeding. The general hospitals were available to admit such cases, being temporarily subsidised by the corporation; suitable food was also supplied by the same body; but unless mothers themselves were particularly careful in regard to the management of their infants there would certainly be a continuance of the mortality from diarrhœa, which last week accounted for 127 deaths, as against 77 in the corresponding period of last year. Two fresh cases of small-pox were reported during the week, making five now under treatment in hospital. Having regard to the importance of the public milk-supply the health committee has authorised Dr. Hope to attend a conference of medical authorities shortly to be held in London on the question. The conference will be arranged for at a date generally convenient and will probably take place a month hence.

Enteric Fever at Fleetwood Camp.

An outbreak of enteric fever has recently occurred among the officers of the 3rd Battalion of the Loyal North Lancashire Regiment quartered at Fleetwood Camp, nine of whom were attacked by the disease and three unfortunately have died. Special inquiries are being made as to the cause of the outbreak. The *Liverpool Daily Post and Mercury* states that the governing body of the town has no jurisdiction over the camp which is on Crown land. The authorities have assisted Major Pearse, the War Department's specialist, in his investigations. Two facts are established—firstly, that the outbreak is limited to the officers' mess and, secondly, that the cause must be either the food or the water. All the food recently purchased in the town and neighbourhood has been traced as far as possible, but everything is reported as being absolutely above suspicion. The water-supply to the camp is exactly the same as that supplied to the town as well as to Blackpool, Lytham, and St. Anne's, and all the neighbouring places. No sickness exists in the camp and Fleetwood's bill of health is quite clean. The water supplied to the officers came from pipes laid by the War Office, the joints of which were found to be bad and leaky, and it was stored in a certain water-barrel cart which seems to have been in a dirty condition. The water has evidently been contaminated from one or both of these sources.

Lunacy in Lancashire: Asylums Board Scheme.

The Local Government Board has consented to the Lancashire Asylums Board borrowing £29,000 for the purchase of the Whalley estate as a site for a new lunatic asylum. The site committee deemed it wise to refrain from erecting a complete asylum for 2000 patients, but decided to erect a portion, leaving time and opportunity of gaining greater experience before deciding upon a plan for the remainder. Of the 13,000 or 14,000 certified pauper lunatics in Lancashire one-fourth are maintained in the workhouse at a substantially less cost to the ratepayer than in the asylum. A conference with boards of guardians is discussing the possibility of arriving at an arrangement whereby a large proportion of chronic and harmless cases shall be maintained at the cost of the asylums board in workhouses, while acute and dangerous cases in the workhouses could be sent to the asylums. The erection of a reception hospital and administrative block with wards attached for 500 acute curable cases of each sex has been recommended.

Sept. 4th.

WALES AND WESTERN COUNTIES NOTES.

(FROM OUR OWN CORRESPONDENTS.)

The Public Health of Newport.

THE most satisfactory feature in Dr. Howard Jones's recently issued report on the health of Newport (Mon.) is the decline in the infantile mortality rate during 1905. A very large portion of the town consists of newly-built houses which have presumably been erected in compliance with modern requirements. During the past 18 years over 7000

houses have been built and 175 new streets have been laid out. Water carriage of excreta is almost universally adopted and a well-equipped isolation hospital receives 80 per cent. of the cases of infectious disease occurring in the borough. It might be expected therefore that Newport would have a much better record as regards infantile mortality than some of the large northern towns which are not so well circumstanced either as to housing accommodation or with respect to other sanitary conditions. During the ten years 1895–1904 the infantile mortality rate averaged 159 per 1000 births and in 1899 it was as high as 188 per 1000 births. In 1905 it was 126 per 1000. This decrease in the mortality among young children is due in part to the improved water-supply and in part to the employment of a female health visitor. For several years prior to 1904 there was a distinct shortage of water in the summer months. As the corporation makes an extra charge for water supplied through a cistern to water-closets many of these are hand-flushed and in times of scarcity are very inefficiently flushed, so that some of the worst features of a privy closet would be produced. The health visitor was appointed in 1892 and is evidently doing good work. During 1905 she paid nearly 1500 visits to houses from which births had been registered and gave advice on infant hygiene and wherever infantile diarrhœa was known to exist she gave information as to the proper dieting of children. The results indicated above are quite sufficient justification for the appointment of this officer. Voluntary notification of phthisis has not been very successful in Newport. There were 68 deaths from this disease during 1905 and only 21 cases were notified. Now that the corporation has decided to utilise one of the blocks at the isolation hospital for the treatment of consumptive patients the number of notifications will probably be increased.

Hereford Dispensary.

This institution has been established over 70 years and includes a provident as well as a charitable branch. During the year ending at midsummer last there were 412 provident members who subscribed £221. Of this sum £155 were distributed among the medical staff and the remainder was placed to the charity account.

The Handel Cossham Hospital, Kingswood.

The Handel Cossham Hospital, which is being erected at Kingswood, near Bristol, at a cost of £27,000, exclusive of furnishing, is now approaching completion and it is expected that the formal opening will take place early next year. The hospital has an endowment fund of £80,000. The total cost of the undertaking was provided for by the late Mr. Handel Cossham, a former Member of Parliament for Bristol.

The Truro Board of Guardians and its District Medical Officer.

At a meeting of the Truro (Cornwall) board of guardians held on August 30th Dr. James Ratcliff-Gaylard attended and complained of some remarks made at a previous meeting of the guardians, when it was stated that the medical officer had been in the habit of sending to the asylum with undue haste persons who were not insane and ought not to be sent there. In protesting against these remarks he said that it was open to him to bring an action for libel against the board and he produced a letter from the medical superintendent of the asylum stating that persons who were not insane would not be kept there. After some discussion the guardians unanimously passed a vote of confidence in Dr. Ratcliff-Gaylard who in acknowledging it expressed himself as being entirely satisfied.

The Devon County Council and Tinned Meat.

At a meeting of the Devon standing joint committee held on August 29th it was reported that during the preceding three months 40 samples of tinned meat had been submitted for analysis under the Sale of Food and Drugs Act and that "grave fault had been found with some foreign brands, the county analyst having in some cases certified that the contents of the tins were unfit for human consumption." It was suggested that the committee should issue some warning notice but the chairman expressed the opinion that nothing would be more effective than the revelations published in the newspapers, adding that the defects were entirely in foreign manufactured products.

Sept. 4th.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

The Water-supply in Islay.

THE question of water-supply for the villages of Portnahaven and Port Wemyss in Islay has been for some time engaging the attention of the local authorities. In the month of July Dr. Robert McNeill, the medical officer, and Mr. Campbell, the sanitary inspector of the county of Argyll, submitted a report to the district committee in which they stated that the water in the reservoir for supplying the villages was found to contain more nitrogenous and suspended matter than is desirable in water used for dietetic purposes, that the reservoir was in several places at the sides overgrown with weeds, and that its bottom appeared to be covered with mud. The provision for filtration was so inefficient that the people complained that tadpoles issued from the pipes, some stating that a teacupful of tadpoles could be found sometimes in a pitcherful of water. With the exception of one man the villagers informed the inspector that they never use the water-supply provided by the district committee for dietetic purposes but drew their water from surface wells. In these wells for the most part the supply of water was pure but the quantity was limited, and one well was found almost dry and swarming with water-flies. In connexion with the water-supply from the reservoir there is no grave source of pollution, and it is thought that by proper filtration, cleansing of the reservoir, removal of weeds and mud, protection of the stream from cattle, and also by the frequent scouring of the pipes the water might be rendered fit for household purposes. The matter has been brought under the notice of the Local Government Board and recently the district was visited by Dr. F. Dittmar and Mr. Carter, C.E., and Dr. McNeill, the sanitary adviser of the Local Government Board.

The Dangers of Shell-fish.

Last year, as was noted in THE LANCET, there was a mild epidemic of enteric fever in the summer months traceable to shell-fish gathered and eaten by trippers to the various seaside resorts on the Firth of Clyde and east coast of Scotland. In consequence of this it was suggested by the medical officer of health of Glasgow that the authorities at the various watering places should erect boards bearing notices warning people from gathering mussels in areas where it was considered they could not be obtained uncontaminated by sewage. Notwithstanding this precaution six cases of enteric fever have just been reported in Glasgow apparently arising from this same cause. In three cases the shell-fish were gathered on the west and the remainder on the east coast. In one instance on the west coast no notices warning the public regarding the danger arising therefrom were to be seen, although in another they were read and disregarded. It would appear also that the east coast local authorities have not yet adopted this measure of warning the public, although in one instance it is reported that the situation from which these shell-fish were gathered was grossly contaminated with sewage. It is now suggested that the local authorities should adopt preventive measures by framing by-laws prohibiting the public, under penalty, from gathering shell-fish in other than the descriptive areas laid down by them—i.e., such places remote at least a quarter of a mile from sewers or other contamination, with all due regard to the ebb-flow, eddies, &c.

Retirement of the Surgeon to the Glasgow Police Force.

Dr. John A. Boyd, who for some years has held the post of medical officer to the Glasgow police force, the fire brigade, and lighting department, has tendered his resignation owing to continued ill health and the resignation has been accepted. It has been stated that the medical man who holds this post has to attend in case of illness about 3050 men, and it is suggested that it would be advisable instead of appointing one medical man to appoint several and divide the work into districts, as was done recently in the case of the Post-office appointment in Glasgow. This suggestion has not met with the approval of the watching and lighting committee of the town council in the hands of which the appointment lies. The committee has agreed that applications for the post should be advertised for at a salary of £400 per annum, with an allowance of £10 per annum for bandages, &c., and £50 per annum for travelling expenses.

Sept. 4th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Longford County Infirmary and its Medical Officer.

AT a recent meeting of the committee of management of the Longford county infirmary a long and elaborate report was read from the Local Government Board with reference to certain charges made by the committee against Mr. N. Mayne who has been surgeon to the infirmary for 30 years. Dr. Hoare, Roman Catholic Bishop of Ardath, presided. The report dealt fully with the subjects of the inquiry held in March last, when the surgeon was charged with disobedience and insubordination, and went also into the charge brought against him on June 26th of having caused an outbreak of diphtheria in the hospital by his admission of a patient suffering from that disease. The report states that apart from the question of the outbreaks of diphtheria the general charges preferred against Mr. Mayne had reference to differences of opinion between him and the committee of management. As regards the admission of a patient without a ticket the matter was exhaustively discussed at the inquiry, and the board considered that when the patient was brought to the infirmary the surgeon could not have done otherwise than admit her, having regard to the urgency of the case and the necessity for immediate operation. As regards the selection of consultants the board considers that the committee having fixed the rate of remuneration would act prudently in leaving the selection of a consultant to the surgeon who is in the best position to judge what special assistance he requires at each operation. Regarding the recent outbreaks of diphtheria in the institution the board referred to the evidence of Dr. J. M. Day, resident medical officer at Cork-street Hospital, in which he stated that if towels were properly disinfected there would be no danger of contagion being conveyed by them. Moreover, if the infection had been conveyed by them symptoms would have appeared before March 27th. The towels had been used by Mr. Mayne in a private case of diphtheria and belonged to the infirmary. The board, however, considered that the practice of the surgeon in taking the infirmary nurse to assist him in his private practice was irregular, and it was also highly irregular that towels or other surgical requisites belonging to the infirmary should be used by Mr. Mayne outside the infirmary, while it was particularly objectionable to have used them in such a disease as diphtheria. But the report on the whole is distinctly in favour of the well-known surgeon to the Longford Infirmary, for it states that it is of opinion that "while there have been irregularities no grave dereliction of duty has been proved."

Typhoid Fever in Belfast.

At a meeting of the city corporation of Belfast held on Sept. 3rd an influential deputation, representing residents in the Malone road district, appeared before the council with reference to an outbreak of typhoid fever in this locality. It was stated by the two spokesmen that 14 cases had been already reported, and that there were others not yet reported, and that relatives of some of the deputation were suffering from the disease. The corporation was urged to take measures for real adequate protection of the milk supply, especially outside the city. No milk, it was suggested, should be sent from a dairy which had not a proper licence from the corporation. There should be adequate inspection both of the cows and of the people who milked them. The sewerage of the district was also referred to and the presence of open gratings was condemned. The council was urged to take some energetic action in such a very serious matter. In the subsequent discussion (on the report of the public health committee) it was admitted that the health authorities were not able to fix the blame on any particular cause, though there was, it was stated by the chairman of the public health committee, suspicion attaching in some direction. It was pointed out by another speaker that it was deplorable that, in the face of such an epidemic in one of the most prosperous districts of Belfast, there should be no one at the head of the public health department who could be looked to for advice in the matter. The chairman of the public health committee, in reference to the want of proper control of the milk-supply, said the corporation was exercising what powers it had, and he regretted that the Bill which was introduced last session as an amendment to the Public Health Bill had been withdrawn. But why has not the Belfast corporation, in the many Bills which it has introduced, not already grappled with this milk problem? The chairman of the public health committee, in reply to a question at the council meeting, said "he understood that 11 houses where typhoid fever had broken out obtained their milk from the same source." The corporation has been urged again and again to take action as other cities have done, but nothing happens. And the city of Belfast for the past four months has had no medical officer of health. The public health committee, urged on to do its duty by the Local Government Board, has decided by a majority to recommend a salary of £800 a year and a special meeting of the council will consider the whole subject on Sept. 5th.

Tuberculosis in Pork.

For two hours on Sept. 3rd the members of the Belfast corporation discussed the regulations for inspection of pork. The rule formerly in use was to follow the dictum of the 1898 Royal Commission on Tuberculosis and destroy the whole carcass of a pig which on inspection showed any evidence of tuberculosis. To this the Belfast Provision Curers' Association objected on the ground that further experience showed such a rigid rule was not necessary, that it was absurd to treat the pig differently from the cow, and that it was contrary to the practice of Germany and America and to the line adopted in such places as Glasgow, Aberdeen, Birmingham, &c. After a long debate the following resolution was passed by 30 votes to 17:—

That in all well-nourished carcasses of pigs where the tuberculosis is strictly confined to the glands of the neck, the head only, or such portion as is affected by the disease, shall be destroyed, the remainder of the carcass being handed back to the owner; and that all carcasses showing unmistakable evidence of the disease having become generalised—i.e., two or more organs affected—the whole of every such carcass shall be destroyed, and that all other carcasses showing unmistakable evidence of the disease shall be destroyed,

Previous to the discussion a deputation from the Trades and Labour Council appeared before the council asking them not to modify the old regulations. It is interesting to watch the zeal of some members of the Belfast corporation to abolish tuberculosis by meat inspection while so little is done in other directions, such as sanitation, control of the milk-supply, building of sanatoriums, &c., to face the problem.

Sept. 4th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Toxic Phenomena following the Administration, per os, of Dead Glanders Bacilli.

AT the last meeting of the Society of Biology held on July 28th M. Catacuzene and M. Riegler communicated a paper upon the above subject. They had observed that the intra-stomachal injection of dead glanders bacilli gave rise to grave symptoms in guinea-pigs, whether young or full grown. The symptoms were those of poisoning followed by death at longer or shorter intervals, or by recovery according to the dose of microbes employed. The preparation of bacilli employed was a culture on glycerine agar, emulsionised in alcohol, in which the bacilli died in a few hours. This emulsion was then centrifuged and the dead bacilli were dried in vacuo. When injected into the intestine the dead bacilli gave rise to toxic symptoms varying in gravity with the size of the dose. Not only the soluble portions of the substance but the very bodies of the bacilli themselves passed out through the intestinal walls and could be detected in the lymphatic glands, in the spleen, and in the lungs, in which last organ they produced foci of bronchopneumonia. Small doses given by the mouth produced a tolerance for the poison provided that three months were allowed to elapse between two doses.

A Medical Man's Will.

Dr. Jaumes, a professor of the Medical Faculty of Bordeaux, has recently died and has made the Faculty of Medicine his legatee. A sum sufficient to produce an annual income of 6000 francs is left for the creation of a chair of general pathology and therapeutics. A sum of 30,000 francs is left to the Association of Medical Men of Hérault and a like sum to the Academy of Sciences, Letters,

and Medicine of Montpellier. An annual prize in legal medicine at the Faculty of Medicine is provided for, and a similar prize is provided for in the Faculty of Law. A life annuity of 10,000 francs is left to an aged relative which reverts at her death to the Faculty of Medicine.

Dysentery at Toulon.

An epidemic of dysentery is reported from Toulon in the 111th Infantry Regiment stationed in a barrack a portion of the buildings of which is of great age. Many soldiers have been sent to the infirmary and many others to the naval hospital. Careful sanitary precautions have been taken. The water-supply has been brought in from outside and if necessary the barrack will be evacuated.

Action of X Rays on the Ovary of the Bitch.

M. Bouchard read a paper upon this subject at a meeting of the Academy of Medicine held on August 6th. The experiments in question were made by M. Roulier. Last year three observers showed that x rays in weak doses could bring about atrophy of the ovary in rabbits. M. Roulier repeated these experiments upon both rabbits and bitches and found that x rays had a selective action on the ovaries. In very small animals atrophy could be easily brought about without the production of any loss of hair. In the bitch, however, it is very difficult to obtain, even though the administration of x rays was carried to the extent of bringing about lesions of the skin. It would appear impossible to bring about atrophy of the ovary in woman, since experiments upon the corpse of a woman showed that x rays No. 10 were unable to modify the colour of a radiometric pastille placed over the ovary.

The Condition of the Blood in Insanity.

At the Sixteenth Congress of Medical Alienists and Neurologists held at Lille on August 1st M. M. Dide opened a discussion on the Condition of the Blood in Insanity. He first dealt with its behaviour on issuing from a wound, its colour, its alkalinity, and the determination of the mineral constituents. He said that in epileptics the specific gravity of the blood showed a diminution immediately before the occurrence of a fit but very soon regained its normal degree. The proportion of red corpuscles was above the average in maniacal conditions and in the mild forms of general paralysis. In dementia præcox during the early stages of mental depression there was sometimes well-marked leucocytosis with polynucleosis and sometimes eosinophilia. Leucocytosis was hardly ever found in general paralysis apart from febrile and convulsive attacks, in which short periods of leucocytosis were the rule. In epilepsy there was a leucocytosis of brief duration which probably began immediately after a fit. In melancholia with occasional excitement the periods of excitement were characterised by a slight leucocytosis with a normal or very slightly diminished proportion of polynuclear cells during the periods of depression. The microbes found in the blood of insane persons were the enterococcus, the staphylococcus, the micrococcus tetragenes, and on rare occasions the streptococcus. Although organisms could often be cultivated from the blood none of them could be regarded as specific. In his remarks on the chemical physics of the blood M. Dide touched on the methods of procuring samples, on the colouration of the serum, on the occurrence of bile in the serum, on cholæmia affecting members of a family, on laking or the staining of the serum with hæmoglobin, on opalescence of the serum, on glykæmia, and on increased osmotic tension (*hypertonie*) of the serum. He then proceeded to the consideration of alexins, bacteriolysins, cytolysins, specific and non specific neurolysins, isohæmolysins antihæmolysins anticytotoxins, specific and non-specific natural antihæmolysins, bacterial hæmolysins, agglutinins, precipitins, hæmo-agglutinins, bacterio-agglutinins, antibacterio-agglutinins, toxins of parasitic origin, chronic and acute microbial toxins, and meta-infectious neuro-toxin. In conclusion, he discussed hæmatology in relation to heredity and the effects of lesions of organs or structures which were concerned in the defence of the body against toxic agencies, such organs or structures being exemplified by the bone marrow, the lymphatic glands, the liver, and the glands of internal secretion. Among the subsequent speakers who took part in the discussion were M. Sabrazès, M. Taty, M. Sicard Léri, and M. Faure.

Sept. 3rd.

ITALY.

(FROM OUR OWN CORRESPONDENT.)

Alexander Herzen.

THE week now closing has been saddened for many Italians by the death of Alexander Herzen at Lausanne, where he had long been enhancing in the chair of physiology the reputation he founded in the same capacity at Florence. Son of the celebrated Russian patriot and man of letters, he was born on June 29th, 1839, and sharing his father's "disabilities" in his native country he made Switzerland the scene of his studies, first literary, then medical, in which latter he distinguished himself at Berne, where he graduated as M.D. in 1862. After a visit, for scientific purposes, to Ireland, he came in 1865 to Florence as assistant to Professor Moriz Schiff, then occupying with great distinction the chair of physiology in the "Istituto di Studi Superiori." He worked assiduously and effectively with his master in those researches in the nervous system and in digestion which at that time gave Florence a European name, and when, on the occasion of Professor Schiff's jubilee, a selection from his works was made *publici juris* in various languages, Herzen was intrusted with the edition in French of his master's great treatise on the "Digestive Process." For 12 years he continued his conjoint labours with the Florentine professor till, under pressure of antivivisectionist agitation, in which the English-speaking colony took an active and far from creditable part, Schiff had to transfer his brilliant and salutary services to Geneva. Herzen then succeeded him in the "Istituto," but in four years had to follow his master to Switzerland, there to act as professor of physiology at Lausanne. From 1881 to the present year he made his chair progressively attractive to students of every nationality, while he will always be gratefully remembered in the canton and in the country as one of the most effective organisers of the new University instituted in 1890. Switzerland had by this time become his native country, in which he represented loyally the views, political and social, which had driven his father into exile—in proof of which may be cited his refusal to accept the restitution of his confiscated estate and fortune offered him by Alexander III. on condition of his renouncing his father's opinions. He was a voluminous but at the same time a weighty and estimable contributor to the literature of his subject, some of his best work having seen the light in Italian, a language in which he wrote and conversed with an idiomatic ease and elegance equally conspicuous in his French and in his German. Of his ten children some were born in Italy, one of them at present holding office under the Italian Government in the Department of Woods and Forests. His death at Lausanne, due to an apoplectic seizure from which he never rallied, became known in Italy on August 28th and evoked poignant regrets in many a circle, scientific, professional, and lay.

National Congress for the Blind.

The annual "Congress" has long been to the profession in Italy what the "post-graduate course" has been in Northern Europe and has quite lately come to be in Italy herself. It was, and is, an opportunity widely and effectively utilised of a professional "comparing of notes" and interchanging of experiences, mostly clinical, which is now systematically afforded in supplement to the medical curriculum at the various schools. The next two months will witness many of these congresses, embracing discussions on the most diverse topics of medical interest, from clinical diagnosis and therapeutics to hydrology and balneary appliances, from public hygiene to the care and (where possible) the cure of the blind. This latter theme will attract to Rome in the late autumn a large assemblage of all interested in the conservation of the visual organs and in the means of aiding those whose eyesight has failed them congenitally or by accident or disease. King Victor Emanuel is expected to honour with his presence this (the Fifth) "Congresso Nazionale per la Prevenzione di Cecità" and the Minister of Public Instruction, who will also preside, has already contributed 1000 fr (£40) towards general expenses. Two committees, one organising and another honorary, are coöperating for the successful issue of the Congress, at which many important papers will be read and discussed by masters, past and present, in the two main sections, that of "Typhlology" and that of the "Prevention of Blindness." While the Congress is sitting

there will be opened to its members an "Esposizione Campionaria," an exhibition of specimens of work executed by the blind. Professor Alfonso Neuschüler, President of the organising committee, has by this time received the "adhesion" of well-nigh all the blind asylums and institutions for the industry of the blind throughout Italy—the latter having announced as contributions to the "Esposizione" the most varied and elaborate specimens of the handiwork of their inmates.

Sept. 1st.

CONSTANTINOPLE.

(FROM OUR OWN CORRESPONDENT.)

The Coffee Trade in Turkey.

THE medicinal value of pure and fragrant coffee has long been recognised, and the coffee trade in Turkey may be considered of importance to the whole medical profession. Turkey annually receives from other countries 9,350,458 kilogrammes of coffee of a value of 93,333,278 piastres, and exports only 4,853,423 kilogrammes, representing the sum of 43,876,778 piastres. Of late, the trade in coffee has considerably diminished, due to the fact that the coffee plants of the Yemen plantations have been suffering from a mysterious disease which has not yet been fully and properly investigated. In consequence of this disease the grains become foul and soft inside and very black outside. A short time ago several branches with diseased coffee grains were sent to Constantinople for purposes of examination and chemical analysis. The result of this has not yet been made known. Another reason of the diminution in the trade is the practice of mixing with real coffee all sorts of extraneous matter, sometimes quite harmless, very frequently, however, deleterious to health. A rather usual admixture is the powder of dried figs. The practice of adding the latter to pure coffee is in great vogue not only in Turkey but also in Austria, in certain parts of Germany, in Roumania, and in Servia. Fig powder is added to coffee in the proportion of 1 to 3. The beverage prepared of this mixture has a deeper colour and possesses considerable nutritive qualities, but much of the essential quality of the coffee is, of course, lost.

Syphilis and Venereal Diseases in Sivas.

From several parts of this vilayet the spread of syphilis and venereal diseases is reported. The sanitary inspector of the province has asked the central authorities of Constantinople promptly to adopt all the necessary measures in order to check the propagation of the malady and to treat the sufferers. It is intended to build in Sivas itself a hospital with, to begin with, 50 beds for syphilitic and venereal patients. Two medical men will be appointed, with a salary of 1500 piastres per month. Their duty will be to visit all the contaminated localities and to render gratuitous assistance to all seeking such. They will also receive a proportionate sum for travelling expenses and for drugs and instruments. Similar measures have already been adopted in other provinces. As soon as the authorities in Sivas find the necessary funds the mentioned measures will be executed.

The Exportation of Rose Essence.

The Bulgarian newspaper *Courrier de Sofia* gives interesting details with regard to the export of rose essence from the principality of Bulgaria. According to that newspaper the average of 3011 kilogrammes of rose essence has been yearly exported from Bulgaria during the period of ten years from 1886 to the end of 1895. This represented the annual value of 1,639,754 francs or 544·5 francs per kilogramme. From the beginning of 1889 to the end of 1905 the export gradually rose to the average annual amount of 4150 kilogrammes, representing the sum of 2,749,926 francs, or 662·6 francs per kilogramme. The increase in the last ten years has thus been 1139 kilogrammes, or 27·4 per cent. per year. The income resulting from the export has therefore proportionately increased to 1,100,072 francs, or 40·4 per cent. per year. The essence of roses is exported into almost every country which has commercial relations with Bulgaria. The markets of England, Austria, Germany, Italy, Russia, Turkey, France, and the United States of America are the most stable. The most is exported to the last-named States. Next comes France with 28·8 per cent. Next England with 16·8 per cent. In 1905 the total exportation amounted to 5316 kilogrammes, of the value of 3,712,388 francs.

August 31st.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Plague Instructions.

THE management of outbreaks of plague has been a routine part of the duties of medical officers for the past seven years, and it has now been thought advisable to issue in a small handbook a description of the various methods which have been found to work well in practice. The Director-General of the Public Health Department begins by reminding all officers that the same care must be exercised in disinfection and the general management of isolated cases as in dealing with distinct outbreaks. It is this individual care so far exercised in Egypt which has chiefly contributed to the success of anti-plague measures. Directly a living case of plague is discovered a police guard should be placed on the house, and the disinfector and the head man of the quarter must be sent for. The probable source of infection should be ascertained and a list made of all contacts, which includes the inhabitants of the house and the nearest relatives. The patient must be removed to the infectious hospital or to a special building or temporary hut which can be utilised as one. The contacts must be examined every day for ten days and disinfected. If a disinfecting station exists in the town, all clothes and soft goods must be removed there; if not, the clothes must be disinfected with the premises. As soon as possible after the patient's arrival at the hospital some serum should be withdrawn from his bubo (or lung in the case of pneumonic plague) with all aseptic precautions; the drop or two of serum ejected on to agar must be sent to Cairo or Alexandria without delay. When the patient is already dead the specimen for bacteriological examination must be procured in the place where the body is lying, corrosive sublimate, 1 in 1000, is given for washing the corpse, and the shroud must be soaked in the same solution; the bier should be lined with zinc or tin and disinfected after use. It is very seldom found necessary to destroy infected clothes, but they should be soaked in sublimate solution for 20 minutes and afterwards thoroughly dried in the sunlight. In all cases of pneumonic plague the contacts must be kept strictly isolated for ten days. It has been found that when concealment of cases is practised in the village a secret gratuity of one dollar for each report of a fresh case of plague has an excellent effect. In the case of a foreign subject neither disinfection nor removal to hospital can take place without previous consultation with the Consul concerned. When the disinfection of a house is finished all rat holes must be thoroughly opened up, a small quantity of carbolic solution, 1 in 10, poured into them, some broken glass placed so as to plug the bottom of the rat run and held in position by mortar, and the hole mortared up flush with the wall. All dead rats and mice found by the workmen are put into a special paraffin tin and covered with carbolic acid. Rat poisoning is best carried out with phosphorus paste concealed in tomatoes. I may here mention that phosphorus and arsenic are the poisons, together with traps, found most useful in Japan. The number of rats killed in Tokyo since 1900 averages more than 800,000 a year, and it is calculated that these dead rats, laid side by side, would extend for a distance of over 75 miles. Yet according to Kitasato, "we can hardly notice any considerable decrease in the number of these animals in Tokyo." Mosques in Egypt must be treated with respect by the disinfecting gangs, but the manager of the mosque is given sublimate solution so that the mosque servants may carry out disinfection. The most convenient form of hospital hut for rapid building is found to be ten metres long by six metres wide, divided by a partition for the two sexes.

Suppression of Malaria at Ismailia.

Under this title the Suez Canal Company has now published a pamphlet in French with maps and illustrations of mosquitoes, detailing the work done by their medical officers on the recommendation of Major Ronald Ross. The town of Ismailia, founded by Lesseps in 1862 on the borders of Lake Timsah, which is now part of the Suez Canal, is inhabited by some 8000 people. It was considered a very

healthy place until malaria was introduced there in 1877, apparently by Italian workmen engaged on the fresh water canal. Ever since the beginning of the British occupation the town has had a bad reputation for malaria, and before anything was known of the etiology of mosquitoes the fever was thought to be caused in some mysterious way by the meeting of sea water from the Mediterranean, from the Red Sea, and from the fresh Nile water brought by an open canal from Cairo to supply the inhabitants. In 1901 Prince d'Arenberg, the president of the Canal Company, determined to try to stamp out the disease and practically succeeded after two years' exertions. The company is practically master of the situation at Ismailia, and as most of the European inhabitants are in the company's service it was easy to see that medical advice was followed, while full pay and free medicines were granted to the sick. In July, 1901, no anopheles could be found in either the European or native quarter, but at the beginning of August the first were seen, and a few days later the whole town was invaded, the chief varieties being anopheles pharoensis and anopheles chaudoyei. Dr. Pressat was sent to Italy to complete his knowledge of the connexion between malaria and mosquitoes, but it was not until the visit of Major Ross in September, 1902, that the Canal Company, in coöperation with the Egyptian Government, decided to destroy, not only the anopheles, but also the culex and stegomia mosquitoes. Three favourite haunts of anopheles, consisting of small and large swamps, were discovered and had to be drained and filled up at a cost of about £2000. One European and three natives were detailed for applying petroleum once a week to cesspools and to see that water was not allowed to lie in or near the houses. On this day the garden fountains and watering-tanks are obliged to be emptied, and measures are taken to see that all ventilators from cesspools are capped with wire netting to prevent the escape of mosquitoes from the petroleum in the cesspools. The annual cost comes to about £750. As a result of the work mosquito nets have not been necessary in Ismailia since the beginning of 1903, and since that year no case of recent malaria has been known in the town. When any cases of malaria have occurred lately they have invariably been due to relapses in old patients, or the disease has been imported into the town from native villages outside the protected zone. It is now to be hoped that these outlying villages will also be treated by the Egyptian Government, and that the Canal Company will continue its useful labours in Port Said and Suez, in both of which towns there are many mosquitoes and at times much malaria. The statistics for Ismailia show that in the year 1901 there were 1990 cases of malaria treated, whereas in the year 1905 there were only 55 cases under treatment, and everyone of those was a relapse occurring in a chronic patient.

August 28th.

NEW YORK.

(FROM OUR OWN CORRESPONDENT.)

Progress of Medicine in the Philippine Islands.

Dr. Victor G. Heiser, surgeon of the United States Marine Hospital Service and Director of Health at Manila, in the Philippine Islands, reports that the past year has been one of great importance in its relation to medical progress in the islands. The most notable event was the passage of an Act by the Philippine Commission establishing a medical school and defining the manner in which it shall be controlled and conducted. It was to be located in Manila and be known as the "Philippine Medical School." The managers are the Secretary of Public Instruction, the Secretary of the Interior, one member of the Commission, and a member designated by the Governor-General. The object of the Commission was to create a class of native physicians, as it is believed that if there was one such qualified practitioner to every 1000 inhabitants the most beneficial results would follow. During the year Saint Paul's Hospital, in Manila, has been established; the Episcopal Church has made the necessary arrangements for establishing a general hospital; the Methodists have opened a dispensary and will soon establish a maternity hospital; the navy has completed a fine modern hospital at Canacao; the army has completed a modern hospital at Fort William McKinley; the Presbyterians have built a large general hospital in Iloilo; and the Government maintains a sanatorium in the mountains of Benguet. In addition to these institutions dispensaries have been established in a large number of places by church organisations or by the Bureau of Health. The report calls attention to researches which Dr. Wilkinson is making on the value of the x rays in the treatment of leprosy; to improvements in the preparation of cholera and plague vaccine; to researches on glanders and its prevention by Dr. Strone; and to researches on tropical light by Major Woodruff, of the United States army.

New Legal Decisions in Divorce Suits.

An application for divorce recently came before the Supreme Court of Massachusetts based on a complaint of "opium drunkenness." It was alleged by the defence that it was not easy to define the word "drunkenness" as applied to the use of opium, morphine, or other drugs. The court held that the evil effects resulting from the continued use of opium or morphine were well known; they interfered as much with the happiness of married life and produced other effects on the marriage relation as deplorable as those resulting from the excessive use of intoxicating liquors; it was the state thus resulting from their excessive use which the legislature intended to describe by the word "drunkenness" as applied to the use of opium, morphine, and other drugs, and from which it was intended to afford relief to the innocent party. In order to warrant a decree the evidence must be such as to justify a finding that the habit was gross and confirmed and existed when the libel was filed.—An application for divorce came before the Court of Appeals of Kentucky, based in effect upon the following question: "Can a wife condone the offence of which the husband confessed he was guilty by living with him, after knowledge on her part of the fact that he had a loathsome disease?" The Kentucky statute declares the "cohabitation as man and wife, after a knowledge of the adultery or lewdness complained of, shall take away the right of divorce therefor." The court in this case placed its opinion on the higher and broader ground that the offence charged in this action is one that the wife cannot condone by cohabiting with her husband so as to deny her the right to obtain from him a divorce for this cause. A husband or wife might be willing and anxious to condone a single act, or a series of acts, of gross misconduct, or cruel treatment, or other specific violation of the marriage obligation, but the infliction of a loathsome disease does not come within this rule; it is a continuing offence, not a distinct or separate grievance that may be forgotten or forgiven in a day or week, or a species of misconduct that affectionate treatment and gentle behaviour might obliterate. It was likely that the defendant when he married believed that he was well, but his innocence in this respect did not affect the question presented. There are reason and justice in the doctrine that the injured spouse may, by his or her voluntary acts, committed with a full knowledge of all the facts, condone a vice or crime, but when either one party or the other has contracted a loathsome disease that may be for all time menacing to the health, dangerous to the life, and distressing to the peace of mind and happiness of the parties, these reasons can have no application.

Effects of Sanitation on West Indian Negro Labourers.

Reports on the health of labourers on the Panama Canal reveal the interesting fact that the sanitary measures adopted for the improvement of the health of the employees have not proved advantageous to the West Indian negroes. They have always been accustomed to sleep in close, unventilated apartments for the purpose of avoiding the night air, which they consider dangerous. The new barracks for labourers admit of very free ventilation night and day, and the result has been that these negroes have been exposed to the night air and the mortality from pneumonia has been excessive.

Fees of Physicians for Insurance Examinations.

The rate of pay of physicians for the examination of persons applying for insurance in life insurance companies has always been disgracefully meagre. The profession has been aroused in many States to the injustice of these fees and there is a widespread movement to obtain redress. The Minnesota State Medical Association has adopted resolutions which declare that any examination for life insurance is incomplete without an examination of the urine of the applicant, and the members of the association are recommended to pledge themselves to charge a minimum fee of $5 for each and every ordinary examination, including chemical

analysis of the urine, and a minimum fee of $10 for each and every examination where a microscopic examination of urine, sputum, or other secretion is required.

A Proposed National Public Health Society.

The Medical Society of the County of New York announces a convention for the purpose of organising a national society the object of which shall be to enforce laws against the irregular practice of medicine and the adulteration of foods. The recent exposures of the beef trust, the indiscriminate sale of alcohol and narcotics and dangerous poisons under the name of patent medicines, and the alarming conditions made known by the Pure Food Bill have led a great many philanthropists and religious associations to issue a call for a conference to be held in New York on Nov. 15th, to discuss ways and means of organising a society to obtain and disseminate accurate information concerning practices and conditions dangerous to the public health and morals, and to prevent quackery, criminal practices in the healing art, adulteration of drugs, and the sale of narcotics and alcohol under the guise of proprietary medicines.

Preventive Work among School Children.

A remarkable effort, aimed at the very root of crime, is being made by the Philadelphia Society to Protect Children from Cruelty. Alienists, physicians, and specialists in various diseases have been invited to aid in the work. Every child taken care of by the society must have filled out for him by his parents in consultation with the examining physician a blank in which space is given for the identification and description of many ills. These blanks were prepared by the leading physicians of Philadelphia, Dr. Weir Mitchell being of the number. The physical examination relates to the family history, bodily measurements, expression of the eyes, memory, voice, speech, general appearance, and the condition and history of every part of the body. The mental diagnosis is made on the answers to questions of family and physical history and condition of every part of the body. Thus prepared with a trustworthy chart of the physical and mental tendencies of the child, the society is prepared to apply intelligently the proper remedial and reformatory measures.

August 26th.

NOTES FROM INDIA.

(FROM OUR SPECIAL CORRESPONDENT.)

The Difficulties of Water-supply for Large Cities.

THE city of Rangoon must now be added to the list of towns in India troubled about their water-supply. The great Hlawga scheme, which has cost Rs. 46 lakhs will only supply adequately a population of 207,000, while Rangoon has now about 300,000 and the population is increasing rapidly. It is estimated that it will cost another Rs 25 lakhs to increase the supply sufficiently for a population of 340,000. It is stated that provision has so far been made for the rate of only 25 gallons per head daily instead of 40 gallons as required. These troubles in Rangoon have their counterpart in Calcutta and Bombay. In the premier city—the capital of India—it is also proposed by the new scheme to provide a supply of 40,000,000 gallons daily. At present about 27,000,000 are pumped into the city daily but by having more powerful engines greater pressure can be put on and the existing mains will probably be able to convey 32,000,000 gallons. This extra supply means more filters besides pumping plant and will cost nearly Rs. 20 lakhs. I have already advised you of the great scheme for a large overhead reservoir to be erected at the north of the city, which will supply water by gravitation instead of by pumping, as at present, at the four distributing stations in the city itself. It seems, however, that the larger supply of water there is to the city the greater proportionate amount of waste goes on, and the cry is continually heard for more. The waste is enormous and is hardly realised by the authorities. Fortunately for Calcutta, the quality of the water is excellent. The filtered water is only used for domestic purposes, there being a separate supply of unfiltered river water for watering the roads and for flushing purposes. Part of the city has had installed a constant system but the larger part is still subject to intermittency.

The Calcutta Crematorium.

The Calcutta Crematorium, after extended trials, has been recently declared fit for use and the first cremation took place a few days ago. The furnace is the patent of Toisul, Fudet, and Co. of Paris, and is worked by gas. The pressure to supply the gas at the rate of 3000 cubic feet per hour if necessary is obtained by a mechanical blower, but it is found that from 6000 to 8000 cubic feet are sufficient for a cremation, and a large part of this amount is consumed in heating up the furnace preparatory to the cremation. I hear that the charges laid down by the corporation are very moderate. There is a growing opinion in favour of cremation in India, and the reduction of the enormous charges at present ruling in connexion with burial will materially promote its more general adoption. This crematorium is the only one worked by gas east of Suez, the other installations at Shanghai employing coke. The gas furnace is perhaps more expensive, but it is certainly cleaner and is devoid of the appearance of a foundry. Although the corporation of Calcutta has liberally provided this crematorium, the credit for its establishment belongs to the Cremation Society of Bengal, which was formed for the purpose and is very influentially supported.

The Plague Mortality.

The plague mortality throughout India, which attained a minimum record for the last week in July, has since increased and the increase has been general in all the districts affected. The figures are small—the total for the week ending August 4th amounting to 738 deaths—but the signs are ominous. The increase in Burmah is especially marked, and Rangoon is probably doomed to another outbreak. Nothing has been announced concerning the researches of the Plague Commission and the old *laissez faire* policy of administration still continues. The only place where a separate plague department seems to be maintained is at Calcutta and the excellence of its work is said to be the chief reason for not placing the administration in other hands.

The High Death-rate in Bombay.

It is a curious thing that while plague is now comparatively quiescent the mortality in Bombay city should be so high, while that of Calcutta is unusually low. The deaths in Bombay may be said to be unaccounted for, because under the heading of "all other causes" the mortality is nearly double the average. A death-rate of from 50 to 60 per 1000 in the absence of an epidemic to explain it requires a searching investigation. It would appear that the first thing Bombay has to do is to find out from what the people are dying. The weekly returns absolutely fail to explain the high mortality.

August 17th.

AUSTRALIA.

(FROM OUR OWN CORRESPONDENT.)

Professional Secrecy.

THE Full Court of Victoria recently gave an important decision as to the interpretation of the law respecting medical evidence. An insurance company was sued for the amount of a policy. The company's defence was that the policy had been secured by misrepresentation, the deceased having stated that he had never had any serious illness, whereas it was asserted that a medical man (not the examiner of the company) had found that he was suffering from pulmonary tuberculosis. The company applied to have this practitioner's evidence taken on commission. The plaintiff objected on the ground that the medical practitioner would be prohibited from giving evidence by a clause in Section 55 of the Evidence Act, 1890, which ran:—

> No physician or surgeon shall, without the consent of his patient, divulge in any civil action or proceeding (unless the sanity of his patient be the matter in dispute) any information which he may have acquired in attending the patient, and which was necessary to enable him to prescribe or act for the patient.

In answer to this objection it had been contended that the prohibition was confined to communications made to the medical adviser by the patient and that he might disclose in evidence any information which he had acquired by his own observation. This contention was supported by the association of this clause with another clause in the same section protecting confessions made to a priest. For plaintiff it was contended that the word "information" was wide enough to cover knowledge howsoever acquired, whether from medical examination or from statements by

the patient, and that the privilege would be illusory if it were confined to his statement. The court thought that the plaintiff's construction of the section was correct and that the commission must be refused. Cost of the summons would be costs in the cause, as a different construction of the section had prevailed since its introduction. Speaking for himself as to the effect of the decision of the court, one of the judges said the point successfully raised gave new and dangerous effect to the section as an obstruction to the administration of justice. No such obstruction existed in England or, as far as he could ascertain, in any other State of Australia. Since the year 1857 medical evidence had been given without consent of the patient and without objection in innumerable cases in the courts—evidence most important in cases of testamentary or other mental incapacity, in the divorce court as to physical conditions proving infidelity, and in cases such as the one before the court, in which its exclusion might leave fraudulent misrepresentation unexposed. No such evidence could be given in the future without the consent of the patient, which in some cases would not, and in other cases could not, be given. For these reasons it seemed to him that repeal or amendment of the section was urgently called for in the interests of justice.

Secret Medical Preparations.

Under the provisions of the Pure Food Act of Victoria the Board of Health has adopted the following regulations:—

No compounded drug of which the average dose is more than one teaspoonful (60 minims) for adults, or is more than one-half of one teaspoonful for children under five years of age, unless such compounded drug is a preparation set out in the British Pharmacopœia, or is sold specifically as an alcoholic compound, shall contain more than 10 per centum by volume of ethyl alcohol.

No drug or compounded drug other than any sold specifically as one of, or as containing one or more of the substances set out herein, or any of their derivations, shall contain opium, or belladonna, stramonium, nux vomica, cannabis indica, cocaine, heroin, or any derivation of any of these drugs, or chloral hydrate, bromides, sulphonal, trional, veronal, paraldehyde, or any other synthetic hypnotic substance, or phenazonum, phenacetinum, or acetanilidum, or any other allied substance.

Under the Commerce Act of the Commonwealth also the Minister of Customs proposes to include under the regulations the following:—

In cases where any such article contains not less than 10 per cent. of ethyl alcohol and the average dose recommended for use shall be greater than one teaspoonful (60 minims), or when any such article contains any of the following ingredients:—Morphine, cocaine, heroin, or the salts or derivatives of the same, or any of them, or of chloral hydrate, belladonna, cotton root ergot, or other abortifacient, the description shall contain an intimation to that effect

Friendly Societies' Dispensaries.

The Prahram United Friendly Societies' Dispensary and Medical Institute has been the defendant in a series of actions recently. The Pharmacy Board of Victoria laid an information that the dispensary not being registered pharmaceutical chemists carried on business as chemists and druggists. The dispensary had established a restricted form of membership whereby members of the public were permitted on payment of a fee of 6*d*. per annum to become "purchasing members" without any other right or privilege except to purchase medicines at the dispensary. The case was first tried by a bench of magistrates who dismissed it. An order to review was granted by a supreme court judge, and the dispensary appealed to the High Court which has now decided against it. The Chief Justice said that if the society were merely dealing with its members in the manner authorised by the Friendly Societies Act it could not be held to be carrying on the business of chemists within the prohibition of the Medical Act, as the two Acts had to be read together. The court was, however, of opinion that the institute was going beyond the mere dealing with its members and was really selling medicines to any of the public who chose to come and pay the necessary 6*d*. and be enrolled.

Hospital Affairs.

A deputation recently waited on the Chief Secretary of New South Wales to ask that legislation should be introduced to prevent other institutions collecting on the same day as the Hospital Saturday Fund and to provide for the proper distribution of all street collections. The Chief Secretary agreed with the deputation and promised to submit a proposal to the Cabinet.—At the last meeting of the directors of the Royal Prince Alfred Hospital, Sydney, a scheme was approved for the allocation of the 469 beds in the hospital when the new wards are opened. The two new pavilions are to be exclusively for surgical cases and one 32 bed ward is to be held in reserve to provide for cleaning of other wards and emergencies.—St. Margaret's Hospital for Women, Sydney, has just opened a district nursing branch to provide poor patients with skilled nursing in their own homes and to teach the poor the elements of sanitation in the home. St. Margaret's is a purely private enterprise, founded in 1894 by Mrs. Abbott. It began with two beds, while last year the number of cases attended to was 398 and the number of nurses trained was 26; 23 surgical operations were performed and 33 medical cases were treated in the patients' own homes; 106 surgical operations were performed and 39 medical cases were treated in the hospital; and over 1200 patients consulted the honorary medical staff for diseases of women. Since it began it has paid no salaries to anyone. Neither Mrs. Abbott, who acts as matron, nor any of the nurses receive any remuneration. The chief source of revenue is the fees paid by nurses for training.

Death of Dr. Long.

The death is announced of Dr. Mark Henry Long, late of Marrickville, near Sydney. He was educated at New York and the London Hospital, and obtained the M.D. degree of the University of the City of New York and the Licence of the Royal College of Physicians of Ireland. He came to New South Wales in 1884. Dr. Long was a well known numismatist and author of "A Skeleton Catalogue of Australian Copper Tokens."

August 3rd.

Obituary.

FRANKLIN HEWITT OLIVER, L.R.C.P. LOND., L.S.A.

Mr. Franklin Hewitt Oliver, late of Kingsland-road, Shoreditch, died on August 22nd at Springfields, Clapton, in the north-east of London, after an illness lasting for over two years. He was the third son of Alderman J. Oliver, M.R.C.P., J.P., of Maidstone, and was born in 1859. He received his medical training at Charing Cross Hospital where he had a successful career as a student, and in 1883 he took the diploma of L.S.A. In 1887 he was admitted a Licentiate of the Royal College of Physicians of London and succeeded to the practice of the late Dr. Burchell of Kingsland-road. His practice soon became one of the most extensive in the district and included many public appointments. For many years he held the position of chief district surgeon to the Royal Maternity Charity and at the time of his death was also surgeon accoucheur to the City of London Lying-in Hospital, surgeon to the G and H divisions of the Metropolitan Police, and surgeon to the Almshouses of the Honourable Company of Ironmongers, as well as being on the board of the Charity Trustees. He was also honorary medical officer and chairman to the Hoxton and Haggerston branch of the Queen Victoria Jubilee Nursing Association, and the work he did in this connexion will remain as a monument of his untiring energy and enthusiasm. Mrs. Oliver, who survives her husband, is a daughter of the Rev. William Cuff, pastor of the Shoreditch Tabernacle, and is left with two children. The funeral took place on August 25th at Abney Park Cemetery when on every side there was evidence of the genuine respect in which the deceased gentleman was held.

THOMAS PONSFORD CANN, M.D. DURH.

A SAD instance of the risks incidental to medical practice is supplied by the death of Dr. T. P. Cann of Newhaven. On August 15th he and his assistant performed an operation for the removal of a patient's tonsils, after which Dr. Cann remarked that he had pricked one of the fingers of his left hand while using the guillotine. This unfortunate accident set up streptococcal infection which proved fatal on August 27th. At an inquest which was held on the following day at the urban council's office in Meeching-road the jury returned a verdict of death from blood-poisoning the result of a wound on the finger caused while deceased was performing an operation on a patient. Dr. Cann was born in 1875 at Newhaven, being the eldest son of Mr. Thomas Martyn Cann, who was for many years in medical practice there until his death last June. Dr. Cann studied medicine at the University of Durham and in

Newcastle-on-Tyne, graduating as M.B. and B.S. in 1899. In 1901 he took the degree of M.D. and joined his father in practice at Newhaven. In 1902 he married the eldest daughter of Mr. Henry M. Langdale, a well-known surgeon practising in Uckfield. The deceased was medical officer of health of the Newhaven urban and port sanitary authority. He also held a variety of local appointments, including that of Admiralty surgeon and agent. The funeral took place on August 30th at Bishopstone churchyard and was very largely attended. A carrying party furnished by the detachment of the Royal Army Medical Corps stationed at Newhaven took the body into the church and afterwards conveyed it to the final resting-place.

RICHARD DAVID EVANS, M.R.C.S. ENG., L.R.C.P. LOND.

Mr. R. D. Evans of Llandilo, Carmarthenshire, died at his residence there on August 5th, after a few days' illness, at the early age of 44 years. He received his medical education at St. Mary's and Guy's Hospitals and took the qualifications of the English Conjoint Board in 1894. He had been in practice in Llandilo for some years and was not long ago appointed medical officer of the urban district of Llandilo in succession to the late Mr. W. H. Lloyd. He was also surgeon to the 1st Volunteer Battalion of the Welsh Regiment. Mr. Evans was an able, conscientious, and painstaking practitioner, who enjoyed the confidence of a large circle of patients and friends. He has left a widow and family.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent foreign medical men are announced:—Dr. Nina Rodrigues, professor of forensic medicine in the University of Bahia.—Dr. Philipp Dospranikoff, professor of anatomy in the Military Medical Academy, St Petersburg.—Dr. Felix Rymowicz, professor of ophthalmology in the University of Warsaw.—Dr. Guyot, senator for the Rhone.—Dr. Salvatore Tomaselli, professor of clinical medicine in the Catania School of Medicine.

Medical News.

FOREIGN UNIVERSITY INTELLIGENCE.—*Berne:* Dr. Loeb has been recognised as *privat-docent* of Pharmacology.—*Budapesth:* Dr. Wilhelm Leitner has been recognised as *privat-docent* of Ophthalmology.—*Florence:* Dr. Lorenz Borri of Modena has been appointed Extraordinary Professor of Forensic Medicine.—*Göttingen:* Dr. Lochte of Hamburg has been appointed Extraordinary Professor of Forensic Medicine. The title of Professor has been granted to Dr. Franz Schieck, *privat-docent* of Ophthalmology.—*Gratz:* The title of Extraordinary Professor has been granted to Dr. Wilhelm Scholz, *privat-docent* of Internal Medicine, and to Dr. Fritz Hartmann, *privat-docent* of Mental Diseases. Dr. Hermann Pfeiffer has been recognised as *privat docent* of Forensic Medicine.—*Strasburg:* Dr. Franz R. Wollenberg of Tubingen has been appointed to the chair of Mental Diseases in succession to the late Dr. Fürstner.—*Vienna:* Dr. Karl Hochsinger has been recognised as *privat-docent* of Children's Diseases.—*Yale:* Dr. George Blumer has been appointed to the chair of Medicine in succession to the late Dr. Ely.

WEST AFRICAN MEDICAL STAFF.—The following appointments have been made to the West African Medical Staff:—A. N. de Gruchy, M.B., Ch.B. Edin., Southern Nigeria; H. E. Arbuckle, M.B., Ch.B. Edin., D.P.H., Sierra Leone; E. J. Tynan, F.R.C.S. Irel., D.P.H., Southern Nigeria; J. Cross, M.B., Ch.B. Glasg., Southern Nigeria; H. T. Palmer, M.R.C.S. Eng., L.R.C.P. Lond., Gold Coast; W. M. Wade, M.B., Ch.B. Dub., Gold Coast; and A. B. Tighe, M.B., Ch.B., B.A.O. Dub., Gold Coast. The following promotions are announced:—A. H. Hanley, C.M.G., F.R.C.S. Irel., deputy principal medical officer in Southern Nigeria, to be principal medical officer in Sierra Leone, vice W. T. Prout, C.M.G., retired. F. G. Hopkins, M.B., B.Ch. Lond., senior medical officer in Southern Nigeria, to be deputy principal medical officer, vice A. H. Hanley, C.M.G. R. J. D'Arcy Irvine, M.B., M.S., senior medical officer, Gold Coast, retires on pension. G. J. Rutherford, M.R.C.S. Eng., L.R.C.P. Lond., senior medical officer, Southern Nigeria, is transferred to the Gold Coast, vice R. J. D'Arcy Irvine.

DISEASED MEAT AT BRISTOL.—The chief inspector of the health department of the Bristol corporation reports that during 1905 the quantity of meat destroyed as unfit for food exceeded 32 tons.

VACCINATION GRANT.—Dr. Alec Forsyth, of Chacewater, Devon, has been awarded for the second consecutive time the Local Government Board grant for successful vaccination.

NEW WORKHOUSE INFIRMARY FOR PLYMOUTH.—At a meeting of the Plymouth board of guardians held on August 21st a tender of £31,637 was accepted for the erection of a new workhouse infirmary.

CONVALESCENT HOME FOR NEWPORT.—Lord Tredegar has given property valued at £12,000 near Newport (Mon.) for the erection of a convalescent home, which will be also fitted up at his expense.

MANCHESTER EPILEPTIC COLONY.—A new epileptic colony for Manchester was formally opened on Sept. 3rd by the Earl of Derby, Lord Lieutenant of the county. The site of the colony is at Langho and the buildings will provide accommodation for over 270 patients, together with the necessary offices and staff. The buildings are divided into separate blocks, each planned to contain 40 beds. Altogether the buildings at present erected number 16, including the house of the medical superintendent, an administration block, a reception and hospital block, the central kitchen and stores block, a general laundry, and workshops for various trades. The ceremony was attended by the Lord Mayor of Manchester and a large number of municipal authorities of the county and district. The visitors assembled in the hospital ward and then walked in procession to the front entrance of the administrative block, where Lord Derby was given a gold key with which to unlock the door. The Rev. J. A. Rushton read prayers in conclusion of the ceremony, and luncheon was afterwards served in the Assembly Hall under the presidency of Dr. J. M. Rhodes, the chairman of the Choriton and Manchester joint asylum committee.

GRIMSBY TOWN COUNCIL AND THE MEDICAL OFFICER OF HEALTH.—On August 29th a special meeting of the town council of Grimsby was held to consider the question of the appointment of a medical officer of health in succession to the late Dr. T. Newby. The meeting was presided over by the mayor. A long argument ensued as to the desirability of making a temporary appointment or not, and the feeling of the meeting in general evidently was that, in place of the present system in which the medical officer of health had been allowed to take private practice and under which various medical men performed various public duties it, would be better to have a medical officer for all public work in the borough, who should give up the whole of his time to his official duties. Sir George Doughty, M.P., however, apparently took exception to this view. Finally it was decided to advertise for a medical officer at a salary of £500 per annum who would undertake all corporation work except that of the education committee. The mayor remarked that he thought £500 was too small a salary, but it does not appear from the report that any increase was voted.

BOOKS, ETC., RECEIVED.

BRYCE, DAVID, AND SON, Glasgow.

A System of Surgical Nursing, with an Appendix containing Useful Formulæ, Emergency Drill, &c. By A. N. M'Gregor, M.D., F.F.P.S.G., Assistant Surgeon to the Glasgow Royal Infirmary. Price 9s. net.

CASSELL AND COMPANY, LIMITED, London, Paris, New York, and Melbourne.

The Other Side of the Lantern. An Account of a Commonplace Tour Round the World. By Sir Frederick Treves, Bart., G.C.V.O., C.B., LL.D., Sergeant-Surgeon to H.M. the King, Surgeon-in-Ordinary to H.R.H. the Prince of Wales, Author of "The Tale of a Field Hospital." Popular edition. Price 6s. net.

CUNDALL, J. W., 8 and 9, Essex-street, Strand, London, W.C., and GREENING AND CO., Limited, 20 Cecil-court, Charing Cross-road, London, W.C.

London. A Guide for the Visitor, Sportsman, and Naturalist. (Re written and enlarged.) By J. W. Cundall, Author of "America Abroad," &c. Price 6d.

F. A. DAVIS COMPANY, 1914-16, Cherry-street, Philadelphia, U.S.A.

The Ear and its Diseases. A Text-book for Students and Physicians. By Seth Scott Bishop, B.S., M.D., LL.D., Author of "Diseases of the Nose, Throat, and Ear, and their Accessory Cavities." Honorary President of the Faculty and Professor of Diseases of the Nose, Throat, and Ear in the Illinois Medical College. Price $4.00 net.

A Primer of Psychology and Mental Disease. For Use in Training-Schools for Attendants and Nurses and in Medical Classes, and as a Ready Reference for the Practitioner. By C. B. Burr, M.D., Medical Director of Oak Grove Hospital (Flint, Mich.) for Mental and Nervous Diseases. Third edition, thoroughly revised. Price $1.25 net.

J. B. LIPPINCOTT COMPANY, Philadelphia and London.

Hand-Atlas of Human Anatomy. By Werner Spalteholz, Extraordinary Professor of Anatomy in the University at Leipzig. Edited and translated from the Fourth German Edition by Lewellys F. Barker, Professor of the Principles and Practice of Medicine, Johns Hopkins University, Baltimore, formerly Professor of Anatomy in the University of Chicago and Rush Medical College. With a Preface by Franklin P. Mall, Professor of Anatomy in the Johns Hopkins University at Baltimore. Second edition in English. Price £2 2s. net per set of three volumes.

The Eye and Nervous System; their Diagnostic Relations. By Various Authors. Edited by Wm. Campbell Posey, A.B., M.D., Professor of Ophthalmology in the Philadelphia Polyclinic, and William G. Spiller, M.D., Professor of Neuropathology and Associate Professor of Neurology in the University of Pennsylvania. Price 25s. net.

JULLIEN, J., Geneva; and GEORG ET CIE, Geneva.

La Médecine à Genève jusqu'à la Fin du Dix-huitième Siècle. Par le Dr. Léon Gautier. Price not stated.

KIMPTON, HENRY, 13, Furnival-street, Holborn, London, E.C., and 40 and 42, University-avenue, Glasgow.

Kimpton's Public Health Series. Food and Digestion in Health and Disease during Infant, Child, and Adult Life. With an Introduction on the Nature of Matter and the Phenomena of Life and an Account of the Source, Properties, and Influence of Water. By M. A. Dutch, M.D., Diplomate in Public Health and Sanitary Science, University of Cambridge, Fellow of the Royal Institute of Public Health, London, &c. Price 2s. 6d. net.

LAURIE, T. WERNER, Clifford's Inn, London.

The Cathedrals of England and Wales. By T. Francis Bumpus. Third Series. Price 6s. net.

LEWIS, H. K., 136, Gower-street, London, W.C.

The Extra Pharmacopœia of Martindale and Westcott. Revised by W. Harrison Martindale, Ph.D., F.C.S., and W. Wynn Westcott, M.B. Lond., D.P.H., H.M.'s Coroner for North-East London. Twelfth edition. Price 10s. net.

LITTLE, JAMES, Melbourne.

Diseases of the Urethra. By P. Clennell Fenwick, M.B. Lond., F.R.C.S. Ed., M.R.C.S. Eng., L.R.C.P. Lond., Fellow of the Royal Geographical Society, late Surgeon to the Wanganui Hospital, New Zealand, late Surgeon to the Christchurch Hospital, New Zealand, Surgeon-Captain Second New Zealand Contingent, South Africa. Price not stated.

MACDOUGALL, ALEX., 68, Mitchell street, Glasgow.

Transactions of the Medico-Chirurgical Society of Glasgow. Volume V. Sessions 1903-1904, 1904-1905. Edited by Hugh M'Laren, M.B., C.M., Editorial Secretary to the Society. Price not stated.

SAFAR, JOSEF, Wien.

Die Infektionskrankheiten rücksichtlich ihrer Verbreitung, Verhütung und Bekämpfung. Kurzgefasstes Lehrbuch für Militärärzte, Sanitätsbeamte und Studierende der Medizin. Von Oberstabsarzt Dr. Ludwig Kamen, weil. ständ. Mitglied des k.u.k. Militär-Sanitäts-Komitees und Lehrer an der militärarztlichen Applikationsschule in Wien. Militärarztliche Publikationen Nr. 100. Lieferung 5/7. Price K.4.80 or M.4.

STANFORD, EDWARD, 12, 13, and 14, Long Acre, London, W.C.

British Rainfall, 1905. On the Distribution of Rain in Space and Time over the British Isles during the Year 1905. By Hugh Robert Mill. Forty-fifth Annual Volume. Price 10s.

WRIGHT, JOHN, AND CO., Bristol. (SIMPKIN, MARSHALL, HAMILTON, KENT, AND CO., LIMITED, London.)

Indications for Operation in Disease of the Internal Organs. By Prof. Hermann Schlesinger, M.D., Extraordinary Professor of Medicine in the University of Vienna. Authorised English Translation by Keith W. Monsarrat, M.B., F.R.C.S. Ed., Surgeon to the Northern Hospital, Liverpool. Price 9s. 6d. net.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward to THE LANCET *Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week, such information for gratuitous publication.*

COX, R. J. H., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon at St. Thomas's Hospital.

CUNNINGHAM, N. R., M.R.C.S., L.R.C.P., has been appointed Resident House Physician at St. Thomas's Hospital.

DICKSON, A. N., M.R.C.S., L.R.C.P., has been appointed Resident House Physician at St. Thomas's Hospital.

DUNKLEY, E. V., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Physician to Out-Patients at St. Thomas's Hospital.

GAMLEN, R. L., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Out-Patients at St. Thomas's Hospital.

GERAIT, LAURENCE, M.R.C.S. Eng., L.R.C.P. Lond., has been appointed Medical Officer of the No. 9 District of the Lincoln Union.

HARPER, FRANCES MARGARET, M.B., Ch.B. Edin., D.P.H. Camb., has been appointed Lady Assistant Medical Officer to the County Borough of St. Helens, Lancashire.

HEWETT, F. S., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon at St. Thomas's Hospital.

HOOKER, A. W., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Junior Casualty Officer at St. Thomas's Hospital.

HOWARTH, W. G., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon at St. Thomas's Hospital.

HOWITT, A. B., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed Resident House Surgeon at St. Thomas's Hospital.

JORDAN, ALFRED C., M.D. Cantab., has been appointed Medical Officer to the Electrical Department of the North-Eastern Hospital for Children, Hackney-road.

MACDONALD, S. G., M.B., B.C. Cantab., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Out-Patients at St. Thomas's Hospital.

NICHOLLS, FRANK J., M.B., B.C. Cantab., M.R.C.S., L.R.C.P. Lond., has been appointed Medical Officer to the London County Council Training College, Avery-hill, Eltham.

NORBURY, L. E. C., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed Senior Casualty Officer at St. Thomas's Hospital.

PAGE, C. M., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Out-Patients at St. Thomas's Hospital.

PHILPOT, H. A., M.R.C.S., L.R.C.P., has been appointed House Physician to Out-Patients at St. Thomas's Hospital.

SANKEY, W. O., M.R.C.S., L.R.C.P., has been appointed House Physician to Out-Patients at St. Thomas's Hospital.

SINGTON, H. S., M.R.C.S., L.R.C.P., has been appointed Resident House Physician at St. Thomas's Hospital.

SQUIRES, H. C., M.B., B.Ch. Oxon., M.R.C.S., L.R.C.P., has been appointed Resident House Physician at St. Thomas's Hospital.

STOCKER, EDWARD GAVED, L.R.C.P. Lond., M.R.C.S. Eng., has been appointed temporary Medical Officer and Public Vaccinator for the Clevedon District, Somerset, by the Long Ashton Board of Guardians.

TAYLOR, CLIFFORD J., F.R.C.S. Edin., has been appointed House Surgeon to the Herefordshire General Hospital.

WHITE, GEORGE F., M.D. Dub., has been appointed Certifying Surgeon under the Factory and Workshop Act for the Stanford-le-Hope District of the county of Essex.

WHITEHOUSE, H. B., M.B., B.S. Lond., M.R.C.S., L.R.C.P., has been appointed House Surgeon to Out-Patients at St. Thomas's Hospital.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident House Physician. Salary £80 per annum, with board, residence, &c.

BIRMINGHAM ASYLUM, Rubery-hill.—Assistant Medical Officer. Salary £150 per annum, with apartments, board, &c.

BIRMINGHAM AND MIDLAND EYE HOSPITAL.—Senior House Surgeon. Salary £85 per annum.

BRIGHTON, SUSSEX COUNTY HOSPITAL.—Second House Surgeon, unmarried. Salary £60 per annum, with board, residence, and washing. Also House Surgeon, unmarried. Salary £100 per annum, with board and residence.

CAMBERWELL HOUSE ASYLUM.—Second Medical Assistant Officer, unmarried. Salary £150, rising to £200, with board, apartments, and laundry.

CAMBRIDGE, ADDENBROOKE'S HOSPITAL.—Assistant House Surgeon. Salary at rate of £50 per annum, with board, residence, and laundry.

CANCER HOSPITAL, Fulham-road, London, S.W.—Senior House Surgeon. Salary £80 per annum.

CAPE OF GOOD HOPE, GREY HOSPITAL, King William's Town.—Resident House Surgeon, unmarried. Salary at rate of £300 per annum, with quarters and one ration.

CARDIFF UNION WORKHOUSE.—Assistant Medical Officer, unmarried. Salary £130 per annum, with rations, apartments, attendance, and washing.

EAST LONDON HOSPITAL FOR CHILDREN AND DISPENSARY FOR WOMEN, Shadwell, E.—House Surgeon for six months. Honorarium of £25, with board, residence, &c.

ECCLES AND PATRICROFT HOSPITAL.—House Surgeon, unmarried. Salary £70 per year, with board, residence, and washing.

EGYPTIAN GOVERNMENT, MINISTRY OF EDUCATION.—Professor of Midwifery and Gynæcology. Salary £400 a year. Also Medical Tutor and Registrar to Kasr-el-Ainy Hospital. Salary £400 a year.

GLASGOW, ROYAL HOSPITAL FOR SICK CHILDREN.—Resident House Physician and Resident House Surgeon, both for six months. Salaries at rate of £50 per annum, with board and laundry. Also Assistant at Dispensary (non-resident) for six months. Salary at rate of £100 per annum.

GREAT NORTHERN CENTRAL HOSPITAL, Holloway.—Pathologist and Curator. Salary £100 per annum. Also Senior House Physician, Senior House Surgeon, Junior House Physician, and two Junior House Surgeons. All for six months. Salaries of senior officers at rate of £60 per annum and of junior officers at rate of £30 per annum, with board, lodging, and washing.

HASTINGS, ST. LEONARDS, AND EAST SUSSEX HOSPITAL.—House Surgeon, unmarried. Salary £75 per annum, with residence, board, and washing.

HUDDERSFIELD INFIRMARY.—Junior House Surgeon. Salary £50 per annum, with board, residence, and washing.

HULL, VICTORIA CHILDREN'S HOSPITAL, Park-street.—House Surgeon. Salary £50 per annum, with board and laundry. Also Assistant House Surgeon. Salary £40, with board and laundry. Both females.

LEICESTER INFIRMARY.—House Physician and Assistant House Physician. Salaries at rate of £100 and £50 respectively, with board, lodging, and washing.

LEICESTER, PARISH OF.—Resident Assistant Medical Officer. Salary £120 per annum, with rations, apartments, and washing.

LIVERPOOL INFIRMARY FOR CHILDREN.—Assistant House Surgeon for six months. Salary £30, with board and lodging.

LIVERPOOL, ROYAL SOUTHERN HOSPITAL.—Resident Pathologist and Registrar. Salary £100, with board and residence.

LOWESTOFT HOSPITAL.—House Surgeon, unmarried. Salary at rate of £80 per annum, with board, lodging, and washing.

MACCLESFIELD GENERAL INFIRMARY.—Junior House Surgeon. Salary £60 per annum, with board and residence.

MANCHESTER, UNIVERSITY OF.—Junior Demonstrator in Physiology. Salary £100, rising to £150 per annum.

METROPOLITAN HOSPITAL, Kingsland-road, N.E.—House Physician, House Surgeon, Assistant House Physician and Assistant House Surgeon, all for six months. Salaries of two former at rate of £40 a year and of two latter at rate of £20 a year. Also Casualty Officer. Salary at rate of £150 per annum.

NEWHAVEN URBAN AND PORT SANITARY AUTHORITIES.—Medical Officer of Health. Salary £75 per annum.

NORTHAMPTON GENERAL HOSPITAL.—Assistant House Surgeon. Salary £50 a year, with apartments, board, washing, and attendance.

PENDLEBURY, MANCHESTER CHILDREN'S HOSPITAL.—Assistant Medical Officer. Salary £100 per annum.

READING, ROYAL BERKSHIRE HOSPITAL.—House Surgeon. Salary £80 per annum, with board, lodging, and washing. Also Assistant House Surgeon. Salary £60 per annum, with board, lodging, and washing.

ROYAL LONDON OPHTHALMIC HOSPITAL, City-road, E.C.—Senior House Surgeon. Salary at rate of £100 a year, with board and residence.

SHEFFIELD ROYAL HOSPITAL.—Resident Medical Officer, unmarried. Salary £50 per annum, with board and lodging.

SHEFFIELD UNION HOSPITAL.—Resident Medical Officer. Salary £100 per annum, with apartments, rations, and allowances.

SOUTHAMPTON, FREE EYE HOSPITAL.—House Surgeon. Salary £150 inclusive.

VICTORIA HOSPITAL FOR CHILDREN, Tite-street, Chelsea, S.W.—House Surgeon for six months. Honorarium of £25, with board and lodging.

WEST LONDON HOSPITAL, Hammersmith-road, W.—Two House Physicians and Three House Surgeons for six months. Board, lodging, and laundry provided.

Births, Marriages, and Deaths.

BIRTHS.

ARCHDALL.—On August 25th, at 42, Ashburnham-road, Bedford, the wife of Mervyn T. Archdall, L.R.C.P., L.R.C.S., of a daughter.

ARMSON.—On August 18th, at The Moat, Yoxall, Burton-on-Trent, the wife of Frank G. Armson, M.R.C.S., L.R.C.P., of a son.

BOWER.—On August 23th, at Viewfield, Stretton, near Warrington, the wife of H. E. Bower, M.D., of a daughter.

BUTTERWORTH.—On August 29th, at The Crescent, Wisbech, the wife of Rupert Butterworth, B.A., M.B., B.C. Cantab., of a daughter.

GORDON-GREEN.—On September 1st, at Westerton, 46, Beach-road, Southsea, the wife of Staff-Surgeon H. W. Gordon-Green, R.N., of a son.

WINDSOR.—On August 31st, the wife of Charles William Windsor, M.D., of a son.

MARRIAGES.

ANNAND—RANNIE.—At Marlborough-place Church, N.W., on the 29th August, William Fraser Annand, M.D., son of R. C. Annand, of Harton Lea, South Shields, to Jessie, daughter of the Rev. J. Rannie, late of Berbice, British Guiana. At home, 9, Lichfield-road, Stafford, after October 15th.

COLLIER—SUMMERHAYES.—On Sept. 1st, at All Souls, Langham-place, James Stansfield Collier, M.D., F.R.C.P., second son of Alfred Henry Collier, Esq., of Cranford, Middlesex, to Minna Maud, only daughter of William Summerhayes, M.D., of Loyterton, Beckenham.

GAYNER—EDWARDS.—On August 28th, at the Friends' Meeting House, Isleworth, John Stansfield Gayner, M.R.C.S., L.R.C.P. Lond., to Alice Maud, daughter of the late Edwin Edwards.

LATHAM—LARSEN.—On August 23rd, at the Cathedral, Trondhjem, Norway, Arthur C. Latham, M.D. Oxon., to Eila Augusta Petrea Larsen, daughter of the late Herr Peter Larsen.

LONGSTAFF—DONALD.—On August 29th, at All Saints, Bolton, Mealsgate, George Blundell Longstaff, M.D., to Mary Jane, daughter of the late Matthewman Hodgson Donald.

DEATHS.

SIMPSON.—On August 28th, at Diyatalawa, Ceylon (Naval Camp), of enteric, Herbert Bartlett Simpson, M.R.C.S., L.R.C.P., Surgeon, R.N., H.M.S. *Sealark*, dearly loved eldest son of George Bartlett and Ellen Simpson, of 2, Chepstow Mansions, W., in his 29th year. (By cable.)

WHITAKER.—On August 29th, at White Lodge, Shrewsbury, Edmund Thomas Whitaker, M.B., B.Sc., D.P.H., Barrister-at-Law, M.O.H. for the county of Montgomery and other districts, elder son of the late Dr. Edmund Whitaker, J.P., Bacup, Lancashire.

WHITE.—On Sunday, August 26th, at Victoria Hospital, Folkestone, Richard Dorner White, M.A., M.D. Univ. Dub., Deputy Inspector-General of Hospitals and Fleets, Royal Navy, aged 61. Interred at Brompton Cemetery August 30th.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

Notes, Short Comments, and Answers to Correspondents.

THE PREVENTION OF CRUELTY TO CHILDREN ARISING OUT OF NEGLECT OF MEDICAL ADVICE.

AT Tower Bridge police-court on August 31st Caroline Russell, of 7, Wickham-place, Tabard-street, Borough, was summoned before Mr. Baggallay by the National Society for the Prevention of Cruelty to Children for neglecting her son Robert, aged eight years. Mr. Huntley Jenkins appeared for the society and Mr. Sydney defended. Mr. Jenkins said the case was not an ordinary one of neglect and it raised a somewhat unusual point. Shortly put, the case was that there was medical evidence to show that an operation upon the boy was absolutely necessary and the defendant in opposition, if not defiance, declined to have it performed. The secretary had no vindictive feeling and there was no neglect in the ordinary sense, the defendant being a fond and careful mother. She was a married woman but her husband was a soldier abroad. The child first came under the notice of the society last December. He was then a cripple and the defendant stated that the child had been operated on three or four times at Guy's Hospital and that since that time she had taken him to a Mr. Burgess. The boy was kept under observation, and on August 10th the defendant consented to the child being examined by a medical man on behalf of the society. The examination was made by Mr. E MacDonald Judge, and on August 13th the society's officer, Mr. Lodge, read to the defendant the medical man's certificate, which stated that the boy was suffering from necrosis of the left thigh bone and in his opinion surgical interference was absolutely necessary to save the limb and possibly the child's life. The defendant still refused to have the operation performed and declared her intention of continuing to use the ointment which she received from Mr. Burgess, and which she considered was making the child better. Mr. Burgess was not a medical practitioner, but there was no complaint against him.

Mr. Lodge, in answer to Mr. Sydney, said that in December the child could only walk with the aid of crutches.

Mr. Sydney: Let the boy walk across the court.

The boy did so without any artificial aid.

Mr. Baggallay: Are you sure this is the same child?

The Witness: Yes.

You have no doubt about it?—No.

Mr. Judge said that the child had necrosis of the thigh bone in the lower quarter. He recognised that the child had been well cared for by the mother who had built up his general condition by intelligent treatment. The boy should be under the care of a surgeon and an operation should be performed.

Mr. Sydney: Are you aware that this child has already undergone four operations?—Yes.

Do you say operations are effective in this disease?—Yes; but sometimes a dozen operations are necessary.

Would not four operations upon a little child like this in 12 months be a fair trial?—No.

Did you attempt to ascertain the properties of the ointment that the woman was applying?—No; ointment is useless in such a case.

Can you say that the application of this ointment was not beneficial?—A corn plaster put on a boot will not cure a corn. The ointment is perfectly useless; it only goes on the skin.

Last Christmas the child was a cripple. Can you suggest how the child is now able to walk so well unless it be through the application of the ointment?—The mother by intelligent treatment has brought about a general improvement in his health, but the disease of the bone still remains.

In reply to the magistrate the witness said he did not probe the leg because he promised the mother not to hurt the boy. He could not positively say that the disease was tuberculous, but there was necrosis. He would not advise an operation until he had probed. What he meant by "surgical interference" in his certificate was that the child should be placed under the care of an experienced surgeon who would watch him for a few days and then operate.

Mr. Baggallay said that before the society had taken proceedings of this sort it should have called a specialist in. There was also the fact that the summons was issued only seven days after the medical man gave his certificate.

Mr. Jenkins: Because the woman flatly refused to take the child to the hospital.

Mr. Baggallay: You want to punish her because she won't obey?—Mr. Jenkins: We do not want her punished.

Mr. Baggallay: Then what is the meaning of these proceedings?—Mr. Jenkins: The only way we could get the custody of the child to have the operation performed was by taking these proceedings. We only want a technical conviction.

Mr. Baggallay: I do not know what a technical conviction means.—Mr. Jenkins: Being bound over or a shilling fine.

Mr. Baggallay: The conviction of the mother for all time of having been guilty of neglecting her child!

Mr. Jenkins said the proceedings were only taken in the interests of the child. If the magistrate was not satisfied with the evidence

he could dismiss the case, allow him to withdraw it, or grant an adjournment in order that further medical evidence could be given.

Mr. Baggallay said that in his opinion the society commenced these proceedings too quickly. The child had already undergone four operations and the mother was not satisfied that another was really necessary. The mother was entitled to know from a specialist that a fifth operation was essential. In the circumstances the summons would be dismissed.

Mr. Jenkins: If you want any further medical evidence it shall be produced.—Mr. Baggallay: I have heard the whole of the evidence you chose to produce and the case is dismissed. I am not the prosecutor.

Mr. Sydney: I do not know what you will say in regard to costs. My client is a poor woman and she has been brought here at considerable expense, which she cannot afford. Mr. Baggallay: If I allow costs it will be rather assuming that I think the mother is entirely right. I do not, but I think the society is wrong in taking these proceedings so hurriedly.

A QUESTION OF LEGAL PROCEDURE.

AN interesting question has arisen at Hinckley. It seems that the relieving officer gave an order for medical attendance to a man in the town, the order being addressed to Dr. A. W. Jenkins, the medical officer appointed by the urban district council. Upon examining his patient Dr. Jenkins found it would be necessary to amputate one of the man's legs, and ordered his removal to the Cottage Hospital, to which the Hinckley guardians subscribe annually. Upon this coming to the notice of the medical officer of the workhouse he contended that as the guardians would have to pay for the amputation the patient should have been brought to the workhouse infirmary, where he would have performed the operation. Both medical men put their views before the guardians, but in the meantime Dr. Jenkins amputated the limb at the hospital. We are glad that we are not asked to express an opinion upon the matter; it bristles with legal points.

A QUESTION IN PHARMACY.

To the Editors of THE LANCET.

SIRS,—In Whitla's "Pharmacy, Materia Medica, and Therapeutics" of an old date, 1892, he says under Chrysarobin (p. 383), "Brooke's Salve Sticks are a splendid way to use chrysarobin." I have tried to get these through my druggists in London and have not succeeded. Can you help me in this matter?

I am, Sirs, yours faithfully.

FRANK HOWARD,
Colonel, Army Medical Staff (R.P.)

Sept. 2nd, 1906.

. We do not know the particular preparation referred to by Sir William Whitla, but the Pharmacopœia of St. Mary's Hospital, London, contains the following which is probably very similar: "'Baculum chrysarobini: ' chrysarobin, 3; wax, 2; lanolin, 5."—ED. L.

MEDICAL MAN AND SPIRITUALIST.

IT is not often that spiritualistic phenomena are in evidence at a coroner's inquest but such a case occurred the other day in Manchester during an inquiry concerning the death of an infant. It died from "accidental suffocation following convulsions." A juror asked Mr. W. J. Heslop, who had examined the body, if he found any impression near the mouth as if it had been covered by an arm or anything like that, to which the reply was that there was no impression at all. The juror claimed to be a spiritualist and clairvoyant, and said he could see a mark on the chin. Mr. Heslop said he was afraid that was not evidence, but the juror persisted, saying: "You may laugh, but it is so. I can see a mark on the chin." A verdict of "Death from natural causes" was returned.

FLOWERS FOR TOWN-DWELLERS.

IT has been recognised in all our hospitals that the keeping of the wards bright with flowers and foliage is particularly grateful to patients. "The spleen is seldom felt where Flora reigns," said the poet, and it seems as though the unrolling of the frond or the development of the bud awakens in the sick thoughts of hope, life, and health. But there is no reason why the beneficial influences of Flora should be restricted for town-dwellers to the time of sickness, although this is practically the only time when they get the solace of leaves and flowers. The majority of us may be compelled to live in the smoke-laden air of a large town, made the more disagreeable nowadays by the fumes of petrol, and the number of persons now driven into towns, as the only centres of employment, is getting larger daily, but the amount of vegetation that will thrive in towns is hardly appreciated. In a recent article in the *Times* a writer advocated the cultivation in garden, forecourts, residential dwelling rooms, and in the dreary, and ofttimes grimy, surroundings of offices and other places of business, of some of our native hardy ferns, which he believed would readily adapt themselves to conditions under which flowering plants would sicken and die. There is no doubt that much might be done in this way to beautify some of the dreary homes and streets of our towns, and the question is a practical one because there are fortunately many other plants besides ferns which could be used for this purpose. This was admirably demonstrated by the Country in Town Exhibition held at Whitechapel in July last and briefly commented upon in our columns (*vide* THE LANCET, July 14th, p. 136). We cannot change our busy commercial centres into garden cities but we can do a great deal towards beautifying them and making them more healthy by calling to our aid plants and flowers. For some years the larger thoroughfares in London have been planted with trees—indeed, it is surprising how difficult it is to get out of sight of a tree in London—and here and there plants may be found in window-boxes or in tubs at the doors of business premises. But if a few more exhibitions such as that at Whitechapel were held the mind of the public would awaken to possibilities undreamed of in the past except by the few. Meanwhile, let us welcome every suggestion for the making of London beautiful and healthy. By the way, we may add that we do not advocate the denuding of lovely country spots of ferns and flowers that they may be sold in the towns, there to die of unsuitable attempts at culture. There are common and hardy plants enough and to spare, and anything like defilements of the country side is odious.

THE HUMOURS OF COUNTRY PRACTICE.

To the Editors of THE LANCET.

SIRS,—In a recent issue of THE LANCET you gave several amusing instances of the various humorous occurrences, both written and spoken, of country practice and I venture to send you a few copied *literatim* from my collection. I regret that it is impossible to reproduce the original writing, but it is of about equal merit with the spelling The first one is from an old gentleman who evidently believed in President Roosevelt's spelling reform.

"Pleas send me another botle of medson and astivicate for another fortnit for the club."

An alternative spelling of certificate is as follows:—

"Sir—Will you be so kinde as to send my son's cifictat and oblig."

A representative note describing a patient's condition is as follows:—

"Mr. —— is a litl betr e as ad a betr nit."

The diagnosis in the following is excellent:—

"Sir Pleas send me a bottel of medisen for the influne and New Ralge by post."

A genteel note to tell of a fortunate occurrence from the patient's point of view reads:—

"Sir—J. T. R—— has ad a sattisfactrey moshon."

Erysipelas proves a great stumbling block, as the two spellings here given show conclusively:—

"Plese will you send me sum medsen i think i have gott Hair Sipless i got a lot of spot hon my fase."

"Dear Sir Sorry to say that my face is not any better and I am afraid it is turning to Harrysiplice."

This description of a hysterical attack, if not as comprehensive as that in the textbooks, is very graphic:—

"Docker If you pleas betsy Ann she as som verry bad pains in her legs and thay swell and her stomak is so bad we pain in a moring that she scars can walk and all most fants a way then she borst out crine and she so low spert and pleas will you grant her a medual certifiate Mr. —— sent to me for won from henery S."

The delicacy underlying the bracketed information in this letter is delightful:—

"I have not been well of late so much pain across my loins, shoulders left side & very much on left on top of body I am (3 mths Fragrant) & a lot of bearing down pains."

This is a happy effort:—

"Sir please my husband mends slowey of is exmas."

The writer of this letter is still alive:—

"From Mrs ——

"To the docker I ham sorry to say ny Left side is so bad it is like sumthing pulling and narling and tearing from my shoulder blade down to my waste so giddey up my neck to the crown of my head i carsley can gide my self a bout dow you think docker if i had sumthing to rub it with outside it wood dow me any good my ribs hurts me so yours truly."

The last I will give is a letter from a lady asking for a school certificate as the children "had the girmen miseals and will you please send me a cerstificate."

I inclose my card and remain, Sirs, yours faithfully,

Sept. 1st, 1906. RUSTICUS.

THE USE OF GOAT LYMPH IN BRIGHT'S DISEASE.

To the Editors of THE LANCET.

SIRS,—I should be grateful if any of your readers could give me some information on the above subject. My own knowledge is exceedingly meagre and anything in the way of criticism will be very acceptable. So far I am prejudiced against its use, both on account of the intolerable thirst produced and the occurrence of muscular irritability. Before going further into the subject I should be glad to know the opinion of others on the use of the lymph in the disease in question. I am, Sirs, yours faithfully,

August 29th, 1906. A GENERAL PRACTITIONER.

PRINCIPALS, LOCUM TENENTS, AND MEDICAL AGENTS.

To the Editors of THE LANCET.

SIRS,—During the last 30 years I have acted, in order of time, as locum tenent for about three years, have been a principal for nearly 23 years, am now acting again as locum tenent, and in a few weeks intend to enter on another practice on my own account, so my experience has been varied and extensive. I have engaged gentlemen to act for me as locum tenents and have acted as such myself. First of all, with reference to medical agents and their fees, my opinion both from the principal and locum tenent's point of view is this, that the fairest and most satisfactory offices to deal with are those which charge a uniform fee of half a guinea to each side. The principal who is willing to pay his share of the fee as a rule secures a more trustworthy representative in his absence, while, on the other hand, the agents who do not charge the principal usually take care to exact a larger fee from the locum tenent, especially when the engagement extends to a month or over that period. This system, needless to say, tends to drive many good locum tenents away, only to seek engagements through those offices where the principal pays half the office fee. Writing now as one who has been, and is about to become, a principal again, I may be allowed to say that a trustworthy locum tenent soon knows his worth and how his services have been appreciated and sought after by those he has acted for, consequently he resents having to pay a larger fee than half a guinea (10*s.* 6*d.*) for any engagement, especially when tips to servants in each house and other and not inconsiderable extras, such as the expense of living in hotels in town in the interval between engagements, are taken into consideration.

I am, Sirs, yours faithfully,

Sept. 3rd, 1906. RETROSPECT.

GOVERNMENT STAMPS ON PATENT MEDICINES.

A PARLIAMENTARY return prepared by the Treasury officials shows that in the year ended March 31st, 1906, the gross receipts derived from the issue of stamps for patent or proprietary medicines amounted to £325,103 13*s.* The numbers of stamps issued, varying in rate according to the price of the medicines, were: at 1½*d.* each, 31,322,832; at 3*d.* each, 7,222,432; at 6*d.* each, 1,154,092; at 1*s.* each, 134,357; at 2*s.* each, 14,808; at 3*s.* each, 12,625; total, 39,861,146. In the year 1901-02 the total number of stamps issued was only 37,753,999, and the gross revenue therefrom only £306,456 17*s.* 2*d.*

HOMES FOR EPILEPTICS.

To the Editors of THE LANCET.

SIRS,—Could any of your readers inform me of a home or institution where a woman, aged about 40 years, who suffers from epilepsy would be received at a small weekly charge?

I am, Sirs, yours faithfully,

EUSTACE J. DE GRUYTHER.

621, Seven Sisters-road, South Tottenham, Sept. 4th, 1906.

FIRST AID IN THE POLICE FORCE.

IN committing for trial a prisoner recently charged with maliciously wounding a policeman by stabbing him Mr. Mead commented thus upon the conduct of another constable who had rendered first aid to the injured man: "I must compliment Police-constable Rodgers on the way in which he rendered first aid. The efficient way in which it is rendered by the police is often brought to my notice. It shows how well the police are instructed in the exercise of this aid and how much the public benefit by it." Everyone will be glad that those who instruct the police should be thus congratulated and that the force should be able to make practical use of the instruction imparted, which must have the effect of awakening their intelligence in many ways. For instance, it no doubt assists them in the appreciation of those cases in which illness is likely to be mistaken for the effects of drunkenness. If there have been instances recently of such mistakes, fewer have been reported in the newspapers, and it is to be hoped that this dangerous error is of less frequent occurrence than it was some years ago. Police-constable Rodgers was able to render effective assistance to a comrade, whose serious condition may be inferred from the fact that he collapsed almost immediately after receiving his wound and from the evidence of a medical witness who deposed that he would be incapacitated for at least a month.

A NEW BED STUFFING.

WE have received from Mr. Thomas Heard of Albert House, Regent-street, Cheltenham, a sample of bedding material which at first sight appears to be cotton wool. On close examination, however, it is found to be of a much finer texture and is quite silky to the touch. Under the microscope the material is seen to consist of small capillary tubes. It is claimed that this material, which we suspect is a vegetable flock akin to thistle down, is very resistant to mildew and to damp and therefore presents very decided advantages as a mattress stuffing compared with many other materials in use. From our examination of the material we can well believe it, and should think that it would make a very excellent bed stuffing. It is soft and silky and yielding. We are disposed to wonder whether any large demand for it could be supplied. We have already referred in our columns to the utter disregard paid to the sanitary condition of material intended for stuffing mattresses, filthy rags being sometimes used for the purpose which have undergone absolutely no cleansing process. If the material of which a specimen has been sent to us by Mr. Heard can be supplied in unlimited quantities and at a moderate price it should have a big future, for it satisfies the requirements of a sanitary and comfortable bed stuffing.

Anonym.—The openings do not appear to us to be very numerous. Application should be made to the Pharmaceutical Society (17, Bloomsbury-square, London, W.C.) and the Society of Apothecaries of London (Water-lane, Blackfriars, E.C.) for information as to the course for the qualifying examinations. The Students' Number of THE LANCET contains the names of certain private schools of instruction.

An Old Shikari.—Our correspondent is thanked for his communication. With regard to his offer we do not think that there will be any benefit in making it public. Extirpation of the spleen is not a particularly difficult operation and no conclusions with regard to the effect of removal of the spleen bringing about immunity from malarial infection or otherwise could be drawn from one case.

ERRATA.—In the list of the medical and surgical staff of Guy's Hospital which appeared in THE LANCET of Sept. 1st, p. 566, the name of MR. R. C. Lucas should have been added to the list of consulting surgeons. From the list of anæsthetists the name of Dr. D. Forsyth should have been omitted and in the list of medical registrars and tutors the name Mr. H. C. C. Mann should read Dr. H. C. C. Mann.—The Royal Institute of Public Health should have been included in the list of places giving instruction in public health at p. 615 as being a place approved for practical laboratory instruction for the diploma in public health.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (10th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), St. George's (2 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Royal Free (2 P.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (3 P.M.).

TUESDAY (11th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (1 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Soho-square (2 P.M.), Chelsea (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (2 P.M., Ophthalmic, 2.15 P.M.).

WEDNESDAY (12th).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. George's (Ophthalmic, 1 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Cancer (2 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Ear (2 P.M.), Royal Orthopædic (3 P.M.), Children, Gt. Ormond-street (9.30 A.M., Dental, 2 P.M.).

THURSDAY (13th).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.), Metropolitan (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Royal Orthopædic (9 A.M.), Royal Ear (2 P.M.), Children, Gt. Ormond-street (2.30 P.M.).

FRIDAY (14th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing Cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), Ophthalmic (10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), London Throat (9.30 A.M.), Samaritan (9.30 A.M. and 2.30 P.M.), Throat, Golden-square (9.30 A.M.), City Orthopædic (2.30 P.M.), Soho-square (2 P.M.), Central London Throat and Ear (2 P.M.), Children, Gt. Ormond-street (9 A.M., Aural, 2 P.M.), St. Mark's (2.30 P.M.).

SATURDAY (15th).—Royal Free (9 A.M.), London (2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), University College (9.15 A.M.), Charing Cross (2 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Throat, Golden-square (9.30 A.M.), Guy's (1.30 P.M.), Children, Gt. Ormond-street (9.30 A.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (10th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Diseases of the Eye.

TUESDAY (11th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. Diseases of the Throat, Nose, and Ear. 2.30 P.M.: X Rays. Operations. Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Dr. C. O. Hawthorne: Clinique. (Medical.)

WEDNESDAY (12th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. Diseases of Children. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. J. Clarke: Clinique. (Surgical.)

THURSDAY (13th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Diseases of the Eye.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. Hutchinson: Clinique. (Surgical.)

FRIDAY (14th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—2 P.M.: Diseases of the Throat, Nose, and Ear. Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations. Diseases of the Skin.

MEDICAL GRADUATES' COLLEGE AND POLYCLINIC (22, Chenies-street, W.C.).—4 P.M.: Mr. L. Paton. Clinique. (Eye.)

SATURDAY (15th).—POST-GRADUATE COLLEGE (West London Hospital, Hammersmith-road, W.).—10 A.M.: Diseases of the Throat, Nose, and Ear. 2 P.M.: Medical and Surgical Clinics. 2.30 P.M.: X Rays. Operations.

EDITORIAL NOTICES.

It is most important that communications relating to the editorial business of THE LANCET should be addressed exclusively "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this office.

Lectures, original articles, and reports should be written on one side of the paper only, AND WHEN ACCOMPANIED BY BLOCKS IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers—not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

MANAGER'S NOTICES.

THE INDEX TO THE LANCET.

THE Index to Vol. I. of 1906, which was completed with the issue of June 30th, and the Title-page to the Volume, were given in THE LANCET of July 7th.

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METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, August 23rd, 1906.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Rain-fall.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp.	Wet Bulb.	Dry Bulb.	Remarks
Aug. 31	30·08	E.	...	130	91	59	63	70	Hazy
Sept. 1	30·07	E.	...	133	93	68	66	75	Fine
,, 2	29·96	E.	...	126	93	66	67	74	Fine
,, 3	29·94	S.	...	131	89	64	66	72	Fine
,, 4	30·11	N.	...	107	78	63	62	67	Fine
,, 5	30·12	N.E.	0·58	102	71	55	54	57	Overcast
,, 6	29·93	S.W.	...	81	70	57	61	64	Cloudy

During the week marked copies of the following newspapers have been received: *The Times, The Irish Times, Macclesfield Courier, Newcastle Chronicle, Daily News, Scientific American, Literary Digest, Rotherham Advertiser, Western Mail (Cardiff), Birkenhead News, Chatham Observer, Wakefield Express, &c.*

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